
FusionDirectory User Manual Documentation

Release 1.4

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Contents

1	FusionDirectory	3
1.1	What is FusionDirectory ?	5
1.2	Prerequisites	6
1.3	Certified distributions	8
1.4	Install FusionDirectory	8
1.5	Update FusionDirectory	20
1.6	Core	110
1.7	Configuration	133
1.8	ACLs	147
1.9	Plugins	168
1.10	Templates	295
1.11	Triggers	305
1.12	Faq	308
1.13	Bug report	309
1.14	Release Policy	311
1.15	License	312
2	Schema2ldif	313
2.1	What is schema2ldif ?	313
2.2	Prerequisites	313
2.3	Install Schema2ldif	313
2.4	ldap-schema-manager	316
2.5	Schema2ldif	317
2.6	License	318
3	Argonaut	319
3.1	What is Argonaut ?	321
3.2	Install Argonaut	321
3.3	Configure Argonaut	324
3.4	Applications	326
3.5	Contribute	328
3.6	License	328
4	Support	329
4.1	Professional paid support	329
4.2	Community support	330

5	Security	331
5.1	Digital signature	331
5.2	Security issues	331
6	Authors	333
6.1	Original GOsa ² AUTHORS	333
6.2	FusionDirectory AUTHORS	334
6.3	FusionDirectory libraries	337
7	Contact Us	339
8	Code of Conduct	341
8.1	Our Pledge	341
8.2	Our Standards	341
8.3	Our Responsibilities	342
8.4	Scope	342
8.5	Enforcement	342
8.6	Attribution	342



Contents:

CHAPTER 1

FusionDirectory



Contents:

1.1 What is FusionDirectory ?

FusionDirectory provides a solution to daily management of data stored in an LDAP directory. Becoming the cornerstone of the information system, the corporate directory becomes more complex offering more data and managing more infrastructure services.

This interface is simple and can be used to delegate fully or partly the data management to non-specialists.

1.1.1 Features

- Users, groups, mail, ssh, personal management.
- Supann norm Management.
- PARTAGE mail integration
- Systems management : dhcp, dns, sudo, all kind of systems.
- System deployment management : FAI, OPSI
- Complex Roles Management.
- Access to multiple LDAP trees.
- FusionDirectory Triggers

1.1.2 Acls and roles

- ACLs are only used by FusionDirectory and not the underlying ldap server.
- ACLs can be assigned to roles.
 - Global administrator : Can do everything.
 - Local administrator : Can manage users and groups and also a branch.
 - Human resources : Can create users from template to optimize the arrival of new people.
 - User : Will only be able to change his data permitted by an administrator

1.1.3 FusionDirectory Triggers

FusionDirectory incorporates a series of triggers that can launch a specific action based on a task FusionDirectory must run.

These triggers are associated with a content type (LDAP user, group, server, password, service and the triggering action (create, edit, delete, change password . . .)

For example, when creating a user, a script generation form can be executed automatically with information from the LDAP server.

This can be useful for generating badges with photo, a form of access to the canteen or sending an email to warn other services of the actual arrival of the person.

This system is also convenient when we want to deploy the account of that person on an application that does not support LDAP.

Another example is when a user leaves, you must:

- archive and delete his mailbox
- archive and remove its network space
- delete him from third party applications not connected to LDAP.

All of this can be easily done by shell scripts (at least in UNIX environment) and run automatically after the suppression of the person by the administrator in FusionDirectory

1.1.4 The interaction with non-LDAP applications

FusionDirectory stores information of a service or a server on an LDAP server. How about when this service does not have the opportunity to interact with LDAP?

This question can be solved by creating:

- LDAP schema suitable for application to the LDAP server
- A plugin for its management in FusionDirectory with the simple plugin API
- An *Argonaut* module for the client installed on the server

1.2 Prerequisites

FusionDirectory is a Web application that will need:

- a webservice;
- PHP;
- an ldap server;
- perl

1.2.1 Web server

FusionDirectory requires a web server that supports PHP, like:

- Apache 2 (or more recent);
- Nginx;
- Microsoft IIS.

1.2.2 PHP

As of 1.4 release, FusionDirectory requires PHP 7.0 or more recent.

Note: We recommend to use the most recent stable PHP release for better performances.

Mandatory extensions

Following PHP extensions are required for the app to work properly:

- `cas`: for CAS authentication;
- `curl`: to communicate with different types of servers and protocols
- `filter`: to filters a variable with a specified filter;
- `fpdf`: to export data in pdf format;
- `gd`: to generate images;
- `iconv` : for the samba integration;
- `imagick` : to handle images;
- `imap`: to handle imap servers management;
- `json`: to get support for JSON data format;
- `mbstring`: to manage multi bytes characters;
- `ldap`: to connect and query the ldap server;
- `openssl`: secured communications and generation of secure tokens;
- `session`: to get user sessions support;
- `simplexml`;
- `xml`.

Optional extensions

Note: Even if those extensions are not mandatory, we advise you to install them anyways.

Following PHP extensions are required for some extra features of FusionDirectory :

- `gettext` : for an internationalized interface.
- `mhash` : to make use of SSHA encryption
- `sha1` : to make use of SSHA encryption
- `zlib`: to handle snapshots;

Configuration

PHP configuration file (`php.ini`) must be adapted to reflect following variables:

```
expose_php = Off;
implicit_flush = Off;
memory_limit = 128M ;      // max memory limit
max_execution_time = 30 ; // not mandatory but advised
session.auto_start = off ;
```

1.2.3 LDAP server

For FusionDirectory to work you need an ldap server.

Servers know to work are :

- OpenLDAP
- 389DS

1.3 Certified distributions

We certify FusionDirectory with all the most common distributions, here is a table which summarizes the level of support by distribution and version.

Fusiondirectory need at least PHP 5.6.

- Fusiondirectory 1.3 need >= PHP 5.6
- Fusiondirectory 1.4 need >= PHP 7.0

DISTRIBUTION	FusionDirectory 1.2	FusionDirectory 1.3
Debian Jessie	need a support contract	need a support contract
Debian Stretch	not supported	supported
Debian Buster	not supported	supported
Ubuntu 16.04 LTS	need a support contract	supported
Ubuntu 18.04 LTS	not supported	supported
Ubuntu 20.04 LTS	not supported	work in progress
Centos 7	need a support contract	supported
Centos 8	not supported	work in progress

1.4 Install FusionDirectory

Install FusionDirectory

1.4.1 Getting the official GPG keys to active package signature

Our packages for Debian and Centos/RHEL are signed with the official gpg key of the project.

Getting the new official gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xD744D55EACDA69FF
gpg --export -a "FusionDirectory Project Signing Key <contact@fusiondirectory.org>" >_
↪FD-archive-key
```

Getting the development gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xADD3A1B88B29AE4A  
gpg --export -a "FusionDirectory Packagers <fusiondirectory-packages@lists.  
↪fusiondirectory.org>" > FD-archive-dev-key
```

Adding the key to apt for Debian/Ubuntu

```
apt-key add FD-archive-key
```

Adding the key to RPM for Centos / RHEL / Scientific Linux

```
cp FD-archive-key /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY  
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

1.4.2 Debian Repository

Debian Stretch

To use the latest published version for **stretch** put this in your `/etc/apt/sources.list`

```
#fusiondirectory repository  
deb http://repos.fusiondirectory.org/fusiondirectory-current/debian-stretch stretch_  
↪main
```

```
#fusiondirectory extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-stretch stretch main
```

Debian Jessie

To use the latest published version for **jessie** put this in your `/etc/apt/sources.list`

```
#fusiondirectory repository  
deb http://repos.fusiondirectory.org/fusiondirectory-current/debian-jessie jessie main
```

```
#fusiondirectory extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie jessie main
```

!!! Wheezy is deprecated and will not be maintained anymore, the latest release is 1.2 !!!

1.4.3 RPM Repository

A repository is available for CentOS 6 / Centos7

This repository contains the stable and oldstable version of FusionDirectory. It also contains the extra packages needed to use FusionDirectory.

To use the latest published version put this in your yum config :

CentOS 6 / RHEL 6

To use the latest published version put this

```
[fusiondirectory]
name=Fusiondirectory Packages for RHEL / CentOS 6
baseurl=http://repos.fusiondirectory.org/fusiondirectory-current/rhel6/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

```
[fusiondirectory-extra]
name=Fusiondirectory Extra Packages for RHEL / CentOS 6
baseurl=http://repos.fusiondirectory.org/fusiondirectory-extra/rhel6/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

SRPMS are also available in the following repo :

```
[fusiondirectory-src]
name=Fusiondirectory Packages for RHEL / CentOS 6
baseurl=http://repos.fusiondirectory.org/fusiondirectory-current/rhel6/SRPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

!!! Scientific Linux is deprecated and will not be maintained anymore, you can switch the centos packages !!!

CentOS 7 / RHEL 7

To use the latest published version put this

```
[fusiondirectory]
name=Fusiondirectory Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/fusiondirectory-current/rhel7/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

```
[fusiondirectory-extra]
name=Fusiondirectory Extra Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/fusiondirectory-extra/rhel7/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

SRPMS are also available in the following repo :

```
[fusiondirectory-src]
name=Fusiondirectory Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/fusiondirectory-current/rhel7/SRPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

1.4.4 Downloading the source

The source download area is here

<https://repos.fusiondirectory.org/sources/>

1.4.5 Install FusionDirectory on Debian

Install FusionDirectory

Installing Dependencies

All The needed dependancies are resolved by the debian packages

Note: The repositories are in https for Debian so you will need to install **apt-transport-https**

Install the FusionDirectory Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your Debian version

Debian Stretch

Debian Jessie

Create 2 new *.list* file your favorite text editor in */etc/apt/source.list.d*

- One for fusiondirectory
- One for fusiondirectory-extra

Install FusionDirectory

You can then install FusionDirectory by running:

```
apt-get install fusiondirectory
apt-get install fusiondirectory-schema
```

FusionDirectory Schema Setup

Now that we have FusionDirectory installed, we need to install the FusionDirectory schemas into our LDAP database.

We can easily do this by running:

```
fusiondirectory-insert-schema
```

You should see the FusionDirectory setup page come up by going to:

<http://SERVER-IP/fusiondirectory>

1.4.6 Install FusionDirectory on Centos

Install FusionDirectory

Installing Dependencies

FusionDirectory requires both the [EPEL](#) repository and the [REMI](#) repository for PHP 7.1

- To install epel

```
yum install https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
```

- To install remi repository

```
yum install http://rpms.remirepo.net/enterprise/remi-release-7.rpm
yum install yum-utils
```

- To enable Remi repo an PHP 7.1

```
yum-config-manager --enable remi-php71
yum-config-manager --enable remi
yum update
```

Install the FusionDirectory Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your centos version

CentOS 6 / RHEL 6

CentOS 7 / RHEL 7

Create 2 new repo file your favorite text editor.

- One for fusiondirectory
- One for fusiondirectory-extra

Install FusionDirectory

You can then install FusionDirectory by running:

```
yum install -y fusiondirectory
yum install -y fusiondirectory-selinux fusiondirectory-schema schema2ldif
```

Warning: If you use SELinux (same in permissive), you must install fusiondirectory-selinux !

FusionDirectory Schema Setup

Now that we have FusionDirectory installed, we need to install the FusionDirectory schemas into our LDAP database.

We can easily do this by running:


```
fusiondirectory-insert-schema -i /etc/openldap/schema/cosine.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/inetorgperson.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/nis.schema
fusiondirectory-insert-schema
```

Now we just need to restart apache:

```
systemctl restart httpd
```

You should see the FusionDirectory setup page come up by going to:

<http://SERVER-IP/fusiondirectory>

1.4.7 Setup FusionDirectory

Once FusionDirectory is installed you can load it in your browser and go through the web setup.

Welcome

FusionDirectory Setup

Welcome to FusionDirectory setup wizard 1.3

Welcome
The welcome message

Language setup

Installation check

LDAP setup

Configuration

LDAP inspection

Finish

This seems to be the first time you start FusionDirectory - we didn't find any configuration right now. This simple wizard intends to help you while setting it up.

What will the wizard do for you?

- Create a basic, single site configuration
- Tries to find problems within your PHP and LDAP setup
- Let you choose from a set of basic and advanced configuration switches
- Guided migration of existing LDAP trees

What will the wizard NOT do for you?

- Find every possible configuration error
- Migrate every possible LDAP setup - create backup dumps!

To continue:

For security reasons you need to authenticate for the installation by creating the file '/var/cache/fusiondirectory/fusiondirectory.auth', containing the current session ID on the servers local filesystem. This can be done by executing the following command:

```
echo -n ugr9reb942o6mrnokbt527ftm0 > /var/cache/fusiondirectory/fusiondirectory.auth
```

Click the 'Next' button when you've finished.

Back Next

The first step requires you to put a token in a file on the server, to make sure you have access to the server.

Note that you may need to replace the “>” by “| sudo tee” if you need to use sudo to access the location.

Language

The screenshot shows the FusionDirectory web interface during the 'Language setup' step. The top left corner displays the FusionDirectory logo and the current step 'Language setup'. The top right corner shows the version '1.3'. On the left, a sidebar lists the installation steps: 'Welcome' (checked), 'Language setup' (highlighted), 'Installation check', 'LDAP setup', 'Configuration', 'LDAP inspection', and 'Finish'. The main content area is titled 'Preferred language' and includes the following text: 'At this point, you can select the site wide default language. Choosing "automatic" will use the language requested by the browser. This setting can be overridden per user.' Below this text is a scrollable list of languages: Automatic, Afrikaans (Afrikaans), Arabic (عربية), Brazilian (Português (Brasil)), Catalan (Català), Chinese (中文, 汉语, 漢語), Colombian Spanish (Español Colombiano), Czech (Česky), Dutch (Nederlands), English (English), Finnish (Suomi), French (Français), German (Deutsch), Greek (ελληνικά), Hungarian (Magyar), Indonesian (Bahasa Indonesia), Italian (Italiano), Japanese (日本語), Korean (한국어), Latvian (Latviešu valoda), and Norwegian Bokmål (Norsk bokmål). The 'Automatic' option is currently selected. At the bottom right, there are 'Back' and 'Next' buttons.

The second step simply lets you select the language in which FusionDirectory and the web setup should be displayed at. If your browser is correctly set it's better to select "Automatic" and let your browser ask FusionDirectory for your preferred language.

Checks

FusionDirectory Setup

- ✓ Welcome
- ✓ Language setup
- Installation check**
Basic checks for PHP compatibility and extensions
- LDAP setup
- Configuration
- LDAP inspection
- Finish

Installation check 1.3

PHP module and extension checks		PHP setup configuration (show information)	
Checking PHP version	Ok	register_globals = off	Ok
Checking for LDAP support	Ok	session.gc_maxlifetime >= 86400	Ok
Checking for gettext support	Ok	session.auto_start = Off	Ok
Checking for curl support	Ok	memory_limit >= 128	Ok
Checking cryptographically secure pseudo-random integers	Ok	implicit_flush = Off	Ok
Checking for json support	Ok	max_execution_time >= 30	Ok
Checking for filter support	Ok	expose_php = Off	Ok
Checking for iconv support	Ok	zend.ze1_compatibility_mode = Off	Ok
Checking for hash method support	Ok		
Checking for IMAP support	Ok		
Checking for mbstring support	Ok		
Checking for imagick support	Ok		
Checking for compression module support	Ok		

Back Next

The third step runs some checks on your PHP installation to make sure everything is installed and setup as needed by FusionDirectory.

LDAP

FUSION
DIREKTORY

LDAP connection setup

1.3

FusionDirectory Setup

- ✓ Welcome
- ✓ Language setup
- ✓ Installation check
- ✓ **LDAP setup**
This dialog performs the basic configuration of the LDAP connectivity for FusionDirectory.
- FusionDirectory configuration
- LDAP inspection
- Finish

LDAP connection

Location name*

Connection URI*

TLS connection

Base*

Authentication

Admin DN

Admin password*

Status

Current status Bind as user 'cn=admin,dc=example,dc=com' to server 'ldap://localhost:389' succeeded!

The fourth step is where you indicate how to connect to you LDAP server. You can use the refresh button to retry connection once you corrected the information.

Configuration

The screenshot displays the 'Configuration screen of FusionDirectory' with a version indicator of 1.3 in the top right corner. On the left, a 'FusionDirectory Setup' sidebar shows progress: 'Welcome', 'Language setup', 'Installation check', and 'LDAP setup' are completed with green checkmarks. The current step, 'FusionDirectory configuration', is highlighted in blue. Below it are 'LDAP inspection' and 'Finish' options.

The main configuration area is divided into several sections:

- Look and feel:** Language is set to 'Automatic', Theme to 'breezy', and Timezone to 'Europe/Paris'.
- Password settings:** Password default hash is 'ssha'. There are input fields for 'Password minimum length' and 'Password minimum differs'. 'Force default hash' and 'Use account expiration' are unchecked. 'SASL Realm' is 'realm.net' and 'SASL Exop' is 'uid'.
- SSL:** 'Key path' is '/etc/ssl/private/fd.key', 'Certificate path' is '/etc/ssl/certs/fd.cert', and 'CA certificate path' is '/etc/ssl/certs/ca.cert'.
- Core settings:** 'LDAP size limit' is 200, 'Edit locking' is 'entryCSN', 'Enable logging', 'Schema validation', and 'Enable snapshots' are checked. 'Snapshot base' is 'ou=snapshots,dc=example,' and 'Wildcard foreign keys' is checked.
- Login and session:** 'Login attribute' is 'uid', 'Enforce encrypted connections' is unchecked, 'Warn if session is not encrypted' is checked, 'Session lifetime' is 1800, 'Login method' is 'HTML form', and 'Header name' is 'AUTH_USER'.
- CAS:** 'CA certificate path' is '/etc/ssl/certs/ca.cert' and 'Host' is 'localhost'. 'Back' and 'Next' buttons are visible at the bottom right.

A blue warning bar at the bottom of the configuration area reads: 'People and group storage (editing this can break your LDAP)'.

The fifth step is the configuration of FusionDirectory. You will be able to edit these settings later but be particularly careful about “people and group storage” section and of course the login settings so that you can connect to your FusionDirectory instance without trouble.

LDAP inspection

The screenshot shows the FusionDirectory LDAP inspection interface. On the left, a sidebar lists the setup steps: Welcome, Language setup, Installation check, LDAP setup, FusionDirectory configuration, **LDAP inspection** (highlighted), and Finish. The main content area is titled "PHP module and extension checks" and contains the following items:

- Inspecting object classes in root object**: Status: Ok
- Checking permission for LDAP database**: Status: Ok
- Checking for invisible users**: Status: Warning. Found 2 user(s) that will not be visible in FusionDirectory or which are incomplete.
- Checking for super administrator**: Status: Ok. Users: fd-admin, mortierbe, swaelensjo
- Checking for default ACL roles and groups**: Status: Warning. Some default ACL roles are missing.
- Checking for users outside the people tree**: Status: Warning. Found 18 user(s) outside the configured tree "ou=people,".
- Checking for groups outside the groups tree**: Status: Ok
- Checking for invisible departments**: Status: Warning. Found 31 department(s) that will not be visible in FusionDirectory.
- Checking for duplicated UID numbers**: Status: Warning. Found 2 duplicate values for attribute "uidNumber":
 - uid=uid,ou=people,dc=example,dc=com
 - uid=ccc,ou=people,dc=example,dc=com

At the bottom of the main content area, there is a partially visible item: "Checking for duplicated GID numbers". Navigation buttons "Back" and "Next" are located at the bottom right of the main content area.

Then some more checks are run, this time about the content of your LDAP directory. If you have some content in there which is not organized as FusionDirectory would expect (or not located in the branches you indicated in the configuration step), you will be able to migrate them.

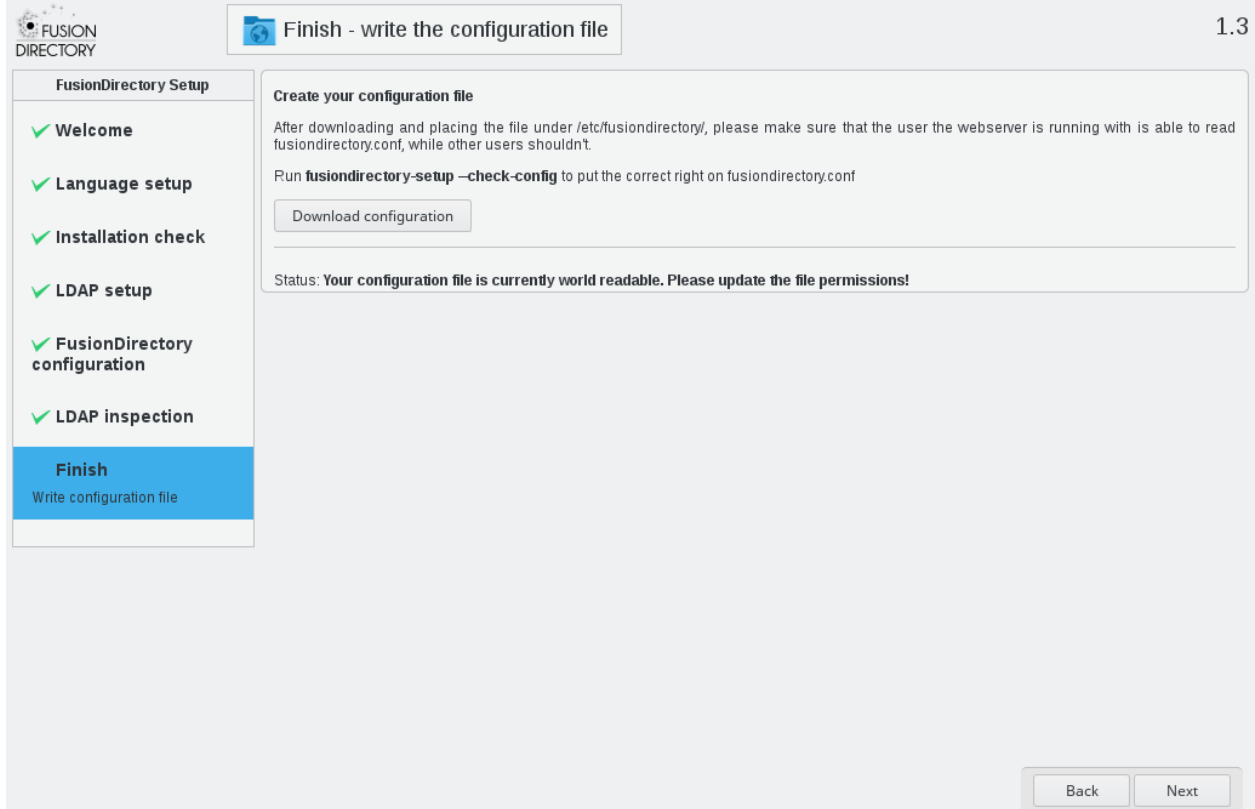
You can see the changes made to the LDAP before applying them.

Usually this is where you create an admin account for FusionDirectory, and inserting default ACL roles and groups is also a good idea, especially if you never used FusionDirectory before.

Finish

The screenshot shows the FusionDirectory web setup interface. The top left corner features the FusionDirectory logo. The main header area displays the current step: "Finish - write the configuration file" with a version number "1.3" on the right. A left-hand navigation pane lists the setup steps: "Welcome", "Language setup", "Installation check", "LDAP setup", "FusionDirectory configuration", "LDAP inspection", and "Finish". The "Finish" step is highlighted in blue and includes the sub-label "Write configuration file". The main content area is titled "Create your configuration file" and contains the following text: "After downloading and placing the file under /etc/fusiondirectory/, please make sure that the user the webserver is running with is able to read fusiondirectory.conf, while other users shouldn't." Below this is a command: "Run `fusiondirectory-setup --check-config` to put the correct right on fusiondirectory.conf". A "Download configuration" button is provided. A status message at the bottom of the main area reads: "Status: The configuration is currently not readable or it does not exists." At the bottom right of the interface are "Back" and "Next" buttons.

You got to the end of the web setup. You now need to download the config file using the button, and store it in `/etc/fusiondirectory` on the server.



You may get this additional message if the permissions are wrong in which case you can run “fusiondirectory-setup –check-config” as root to fix those.

Once everything is fine, clicking next will redirect you to the login screen of your FusionDirectory installation.

1.5 Update FusionDirectory

Update FusionDirectory

1.5.1 Supported

Supported version

Migrate FusionDirectory from 1.3 to 1.3.1

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly

Debian Repository.

RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys for the packages to install correctly

Getting the official GPG keys to active package signature.

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

if you are using the sinaps plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/sinaps-fd-conf.  
↪ schema
```

Functionality Added

- The macro `%passwordClear%` is now available in the sambaAccount so that in can be used in hooks for AD sync.
- The ldapdump functionality is now available on the configuration
- The supann etablissement objects is now equal to entite objects except for the attribute ou

Functionality removed

- The google+ account storage has been removed from personal social accounts tab

Enjoy :)

Migrate FusionDirectory from 1.2.3 to 1.3

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly

Debian Repository.

RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys for the packages to install correctly

Getting the official GPG keys to active package signature.

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade core schema of FusionDirectory

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

if you are using the audit plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/audit-fd.schema
```

if you are using the argonaut plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema
```

if you are using the community plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/community-fd.schema
```

if you are using the dhcp plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/dhcp-fd.schema
```

if you are using the ejbca plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/ejbca-fd.schema
```

if you are using the opsi plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/opsi-fd.schema
```

if you are using the postfix plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/postfix-fd.schema
```

if you are using the supann plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/supann-fd-conf.  
↪ schema
```

if you are using the systems plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema  
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd-conf.  
↪schema
```

if you are using the user reminder plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/user-reminder-fd-  
↪conf.schema
```

if you are using the weblink plugin you have to update is schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/weblink-fd.schema
```

Enjoy :)

Migrate FusionDirectory from 1.2.2 to 1.2.3

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly
Debian Repository.
RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys
for the packages to install correctly
Getting the official GPG keys to active package signature.

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Enjoy :)

Migrate FusionDirectory from 1.2.1 to 1.2.2

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly
Debian Repository.
RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys for the packages to install correctly
Getting the official GPG keys to active package signature.

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Enjoy :)

Migrate FusionDirectory from 1.2 to 1.2.1

New Depot Configuration

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly
Debian Repository.
RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys for the packages to install correctly
Getting the official GPG keys to active package signing.

Upgrade schema2ldif

For Jessie distribution add extra repository

```
#fusiondirectory debian-extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie/ jessie main
```

Update the package list and upgrade schema2ldif

```
apt-get update
apt-get install schema2ldif
```

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade core schema of FusionDirectory

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
```

Enjoy :)

1.5.2 Unsupported version

Unsupported version

Migrate FusionDirectory from 1.0.1 to 1.0.2

Remove fusiondirectory-plugin-opsi

Before migration from FusionDirectory 1.0.1 to 1.0.2 is important to remove the fusiondirectory-plugin-opsi and fusiondirectory-plugin-log to avoid errors:

Debian

```
apt-get remove fusiondirectory-plugin-opsi
apt-get remove fusiondirectory-plugin-log
```

RHEL / Fedora

Not Applicable

Upgrade fusiondirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Debian

```
apt-get update
apt-get install fusiondirectory
apt-get upgrade
```

RHEL / Fedora

```
yum makecache
yum upgrade fusiondirectory\*
```

Migrate FusionDirectory from 1.0.2 to 1.0.3

Remove fusiondirectory-plugin-goto

Before migration from FusionDirectory 1.0.2 to 1.0.3 is important to remove the fusiondirectory-plugin-goto, fusiondirectory-plugin-mit-krb5 and fusiondirectory-plugin-phpgw to avoid errors:

Debian

```
apt-get remove fusiondirectory-plugin-goto
apt-get remove fusiondirectory-plugin-mit-krb5
apt-get remove fusiondirectory-plugin-phpgw
```

RHEL / Fedora

Not Applicable

Upgrade fusiondirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Debian

```
apt-get update
apt-get install fusiondirectory
apt-get upgrade
```

RHEL / Fedora

1. yum makecache
2. yum upgrade fusiondirectory*

Run setup

Starting with version 1.0.3, the addition of a plugin is handled automatically by fusiondirectory. To activate this you have to re-run the setup from the web interface.

```
mv /etc/fusiondirectory/fusiondirectory.conf /etc/fusiondirectory/fusiondirectory.  
↪conf.back
```

Then from web interface type :

http://your_server/fusiondirectory/setup.php

and fill the required information.

Migrate FusionDirectory from 1.0.3 to 1.0.4

Upgrade fusiondirectory first

Upgrade FusionDirectory core package and fusiondirectory-plugin-systems (if it's installed) before other ones to avoid dependencies errors:

Debian

```
apt-get update  
apt-get install fusiondirectory  
apt-get upgrade
```

Main page is changed

Starting with version 1.0.4, the main page of FusionDirectory interface is changed. From now, the main menu will be displayed in the following order:

- Administration
- Addons
- My Account

To adapt to change, you have 2 ways :

- Re-run setup
- Change data manually in fusiondirectory.conf

Re-run setup

Before you re-run the setup from the web interface, you must do this :

```
mv /etc/fusiondirectory/fusiondirectory.conf /etc/fusiondirectory/fusiondirectory.  
↪conf.back
```

Then from web interface type :

http://your_server/fusiondirectory/setup.php

and fill the required information.

Change data manually in fusiondirectory.conf

In fusiondirectory.conf file, in the menu part, you must place sections in this order :

- section name="Administration"
- section name="Addons"
- section name="My account"

Upgrade of LDAP directory

You have to update your LDAP schema, FusionDirectory provide you dedicated LDIF file for updating your LDAP tree. If you are still using .schema files a restart of your ldap server should be sufficient.

The files to apply to your OpenLDAP server, there are stored in "/etc/ldap/schema/fusiondirectory/update-from-1.0.3"

```
ls -l /etc/ldap/schema/fusiondirectory/update-from-1.0.3/*  
  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/remove-trust.ldif  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-argonaut.ldif  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-fdQuota.ldif  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-goserver.ldif  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-goto.ldif  
/etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-recovery.ldif
```

Remove trust schema

If in a previous version of FusionDirectory you have installed *trust.schema*, you need to remove it. For this you can use *remove-trust.ldif*.

Because we can not predict the order of schema insertion in your ldap directory, you need to modify the provided *remove-trust.ldif*.

- Identify the number of insertion of the trust schema in your ldap directory :

```
ldapsearch -Y EXTERNAL -H ldapi:/// -LLL -b cn=schema,cn=config \ | grep "dn: cn={"  
dn: cn={29}trust,cn=schema,cn=config ...
```

- edit the *remove-trust.ldif* file :

```
nano /etc/ldap/schema/fusiondirectory/update-from-1.0.3/remove-trust.ldif  
dn: cn=trust,cn=schema,cn=config ...
```

and add the find number {29} at the first line, like this :

```
dn: cn={29}trust,cn=schema,cn=config
```

- Run the *fusiondirectory-insert-schema* command :


```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/update-from-1.0.3/
↳remove-trust.ldif
```

```
SASL/EXTERNAL authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
executing 'ldapadd -Y EXTERNAL -H ldapi:/// -f /etc/ldap/schema/fusiondirectory/
↳update-from-1.0.3/remove-trust.ldif'SASL/EXTERNAL
authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
modifying entry "cn={29}trust,cn=schema,cn=config"
```

Update needed fusiondirectory schema

The following needed schema must be upgraded :

- goserver, goto, recovery

Because we can not predict the order of schema insertion in your ldap directory, you need to modify the provided update-goserver.ldif, update-goto.ldif, update-recovery.ldif.

For exemple, for goserver schema :

- Identify the number of insertion of the goserver schema in your ldap directory :

```
ldapsearch -Y EXTERNAL -H ldapi:/// -LLL -b cn=schema,cn=config \ | grep "dn: cn={"
dn: cn={9}goserver,cn=schema,cn=config ...
```

- Edit the update-goserver.ldif file :

```
nano /etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-goserver.ldif
dn: cn=goserver,cn=schema,cn=config ...
```

and add the find number {9} at the first line, like this :

```
dn: cn={9}goserver,cn=schema,cn=config
```

- Run the fusiondirectory-insert-schema command :

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/update-from-1.0.3/
↳update-goserver.ldif

SASL/EXTERNAL authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
executing 'ldapadd -Y EXTERNAL -H ldapi:/// -f /etc/ldap/schema/fusiondirectory/
↳update-from-1.0.3/update-goserver.ldif'SASL/EXTERNAL
authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
modifying entry "cn={9}goserver,cn=schema,cn=config"
```

You must do the same for goto et recovery also.

Upgrade argonaut schema

If you've installed *argonaut* plugin, you must upgrade his schema.

Because we can not predict the order of schema insertion in your ldap directory, you need to modify the provided update-argonaut.ldif.

- Identify the number of insertion of the argonaut schema in your ldap directory :

```
ldapsearch -Y EXTERNAL -H ldapi:/// -LLL -b cn=schema,cn=config \ | grep "dn: cn={"  
dn: cn={14}argonaut,cn=schema,cn=config ...
```

- Edit the update-argonaut.ldif file :

```
nano /etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-argonaut.ldif  
dn: cn=argonaut,cn=schema,cn=config
```

and add the find number {14} at the first line, like this :

```
dn: cn={14}argonaut,cn=schema,cn=config
```

- Run the fusiondirectory-insert-schema command :

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/update-from-1.0.3/  
↪update-argonaut.ldif  
  
SASL/EXTERNAL authentication started SASL username:  
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0  
executing 'ldapadd -Y EXTERNAL -H ldapi:/// -f /etc/ldap/schema/fusiondirectory/  
↪update-from-1.0.3/update-argonaut.ldif'SASL/EXTERNAL  
authentication started  
SASL username: gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0  
modifying entry "cn={14}argonaut,cn=schema,cn=config"
```

Upgrade fdQuota schema

If you've installed *quota* plugin, you must upgrade fdQuota schema.

Because we can not predict the order of schema insertion in your ldap directory, you need to modify the provided update-fdQuota.ldif.

- Identify the number of insertion of the fdQuota schema in your ldap directory :

```
ldapsearch -Y EXTERNAL -H ldapi:/// -LLL -b cn=schema,cn=config \ | grep "dn: cn={"  
dn: cn={25}fdQuota,cn=schema,cn=config ...
```

- Edit the update-fdQuota.ldif file :

```
nano /etc/ldap/schema/fusiondirectory/update-from-1.0.3/update-fdQuota.ldif  
dn: cn=fdQuota,cn=schema,cn=config ...
```

and add the find number {25} at the first line, like this :

```
dn: cn={25}fdQuota,cn=schema,cn=config
```

- Run the fusiondirectory-insert-schema command :

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/update-from-1.0.3/
↳update-fdQuota.ldif
```

```
SASL/EXTERNAL authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
executing 'ldapadd -Y EXTERNAL -H ldapi:/// -f /etc/ldap/schema/fusiondirectory/
↳update-from-1.0.3/update-fdQuota.ldif'SASL/EXTERNAL
authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0
modifying entry "cn={25}fdQuota,cn=schema,cn=config"
```

Migrate FusionDirectory from 1.0.4 to 1.0.5

Clean FusionDirectory schema directory

Debian

```
rm /etc/ldap/schema/fusiondirectory/*.ldif
```

Upgrade of LDAP directory

Install schema packages

Upgrade new schema core first:

Debian

```
apt-get update
apt-get install fusiondirectory-schema
```

Then, depending of your installation, install new schema packages for your installed plugins.

For example, if you have Systems, Dhcp and Dns plugin installed, you need to:

Debian

```
apt-get install fusiondirectory-plugin-systems-schema
apt-get install fusiondirectory-plugin-dhcp-schema
apt-get install fusiondirectory-plugin-dns-schema
```

Remove old schema from your Ldap Directory

Your installed schema are in /etc/ldap/slapd.d/cn=config/cn=schema directory. For the above example, installed schema will be the following:

Debian

```
ldapsearch -Y EXTERNAL -H ldapi:/// -LLL -b cn=schema,cn=config \ | grep "dn: cn={"
SASL/EXTERNAL authentication started SASL username:
gidNumber=0+uidNumber=0,cn=peercred,cn=external,cn=auth SASL SSF: 0 dn:
cn={0}core,cn=schema,cn=config dn: cn={1}cosine,cn=schema,cn=config dn:
```

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```
cn={2}nis,cn=schema,cn=config dn:
cn={3}inetorgperson,cn=schema,cn=config dn:
cn={4}samba,cn=schema,cn=config dn: cn={5}gosystem,cn=schema,cn=config
cn={6}gofon,cn=schema,cn=config dn: cn={7}gofax,cn=schema,cn=config
cn={8}goto,cn=schema,cn=config dn:
cn={9}goserver,cn=schema,cn=config dn:
cn={10}goto-mime,cn=schema,cn=config dn:
cn={11}gosa-samba3,cn=schema,cn=config dn:
cn={12}ldapns,cn=schema,cn=config dn:
cn={13}recovery,cn=schema,cn=config dn: cn={14}dhcp,cn=schema,cn=config
cn={15}dnszone,cn=schema,cn=config
```

Schema's from 'cn={0}...' to 'cn={3}' doesn't change, so you can leave it.

Now you need to remove all others before install the new one's. You can start to remove before plugin schemas. Doing this is simple, just delete its relative file in the folder

```
/etc/ldap/slapd.d/cn=config/cn=schema
```

and restart slapd. A word of advice, remove schemas starting from the last. For the above example:

Debian

```
cd /etc/ldap/slapd.d/cn=config/cn=schema
rm cn={15}dnszone.ldif
rm cn={14}dhcp.ldif
/etc/init.d/slapd stop
/etc/init.d/slapd start
```

If everything goes right, you can remove core schemas:

Debian

```
rm cn={13}recovery.ldif
rm cn={12}ldapns.ldif
rm cn={11}gosa-samba3.ldif
rm cn={10}goto-mime.ldif
rm cn={9}goserver.ldif
rm cn={8}goto.ldif
rm cn={7}gofax.ldif
rm cn={6}gofon.ldif
rm cn={5}gosystem.ldif
rm cn={4}samba.ldif
/etc/init.d/slapd stop
/etc/init.d/slapd start
```

Insert new schemas inside your Ldap Directory

First of all insert the new core schemas:

Debian

```
fusiondirectory-insert-schema
```

Then you can proceed for all the plugins schemas (here you can find a [list of available plugins with old and new relative schemas](#)), for the above example:

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/service-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/systems-fd-conf.
↪schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/mime-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/systems-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dhcp-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dnszone.schema
```

Upgrade fusiondirectory first

Upgrade FusionDirectory core package and fusiondirectory-plugin-systems (if it's installed) before other ones to avoid dependencies errors:

Debian

```
apt-get install fusiondirectory
apt-get install fusiondirectory-plugin-systems
apt-get upgrade
```

Configuration file is changed

Starting with version 1.0.5, the configuration of FusionDirectory is stored inside the ldap, in *configs* branch.

To adapt to this change, you need to Re-run setup.

Re-run setup

Before you re-run the setup from the web interface, you must move your old configuration file, doing this :

```
mv /etc/fusiondirectory/fusiondirectory.conf /etc/fusiondirectory/fusiondirectory.
↪conf.back
```

Then, in your web browser, you can type :

http://your_server/fusiondirectory/setup.php

and fill the required informations (look here to see more about [parameters of configuration](#)).

Possible problems and related solutions

Below you will find some migration issues, grouped by plugin, with their solutions.

FAI plugin

Before save modifications in a Server, look (inside your ldap directory) if there is an objectClass FAI like this one, associated at this Server:

```
objectClass: FAIobject
```

if you don't find any other FAI attribute for this Server, you need to remove the above mentioned objectClass, in order to avoid automatic generation of FAI attributes in related entry. This happens because 'objectClass: FAIobject' means that FAI tab for the related server is activated.

Mail plugin

unrecognized objectClass 'goMailServer'

If you get an error like this :

```
LDAP operation failed!

Object: cn=mailserver.fusiondirectory.org,ou=servers,ou=systems,dc=fusiondirectory,
↳dc=org

Error: Object class violation (unrecognized objectClass 'goMailServer', while_
↳operating on 'cn=mailserver.fusiondirectory.org,ou=servers,ou=systems,
↳dc=fusiondirectory,dc=org' using LDAP server 'ldap://localhost:389')
```

this means that in your related ldap entry you have an objectClass like this :

```
objectClass: goMailServer
```

you need to modify this one to :

```
objectClass: fdPostfixServer
```

Undefined attribute type - attribute: flag_enable_debug

If you get an error like this :

```
LDAP operation failed!

Object: cn=mailserver.fusiondirectory.org,ou=servers,ou=systems,dc=fusiondirectory,
↳dc=org

Error: Undefined attribute type - attribute: flag_enable_debug
(flag_enable_debug: AttributeDescription contains inappropriate characters, while_
↳operating on 'cn=mailserver.fusiondirectory.org,ou=servers,ou=systems,
↳dc=fusiondirectory,dc=org' using LDAP server 'ldap://localhost:389')
```

this means that in your related ldap entry you have an attribute like this :

```
avFlags: DS
```

you need to remove this attribute.

Migrate FusionDirectory from 1.0.6 to 1.0.7

Upgrade fusiondirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Debian

Add new debian-extra repo to you source list

```
deb http://repos.fusiondirectory.org/debian-extra jessie main
```

```
apt-get update
apt-get install fusiondirectory
apt-get upgrade
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas. We have put a new option in fusiondirectory-insert-schema that allow you to update easily your schema without the use of ldif files.

The following schemas needs an update :

- core-fd-conf.schema
- mail-fd.schema
- service-fd.schema
- systems-fd-conf.schema
- systems-fd.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

You must do the same procedure for all other schema needing an update

Migrate FusionDirectory from 1.0.7 or 1.0.7.1 to 1.0.7.2

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas. We have put a new option in fusiondirectory-insert-schema that allow you to update easily your schema without the use of ldif files.

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.
↪schema``
```

Migrate FusionDirectory from 1.0.7.2 to 1.0.7.3

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas. We have put a new option in `fusiondirectory-insert-schema` that allow you to update easily your schema without the use of `ldif` files.

In this version only the schema from the `argonaut` plugin needs to be update if you have the `systems` or `argonaut` plugins installed

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema``
```

Migrate FusionDirectory from 1.0.7.3 to 1.0.7.4

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Migrate FusionDirectory from 1.0.7.4 to 1.0.7.5

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors.

Migrate FusionDirectory from 1.0.7.4 to 1.0.8

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Remove the deprecated plugins

The `rolemanagement` plugin has been integrated to the core so it must be removed.

```
apt-get --purge remove fusiondirectory-plugin-rolemanagement
```

The `board` plugin has been renamed so it must be replaced

```
apt-get --purge remove fusiondirectory-plugin-board  
apt-get install fusiondirectory-plugin-dashboard
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas.


```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

After that you have to update the schema for the plugins you are using. In this version the following schema have to be updated

- argonaut-fd-schema
- ipmi-fd.schema
- repository-fd.schema

Migration of the FusionDirectory acs

FusionDirectory acl management has been changed from 1.0.7 to 1.0.8, so they need to be migrated. We added a command to fusiondirectory-setup for that.

```
fusiondirectory-setup --migrate-acls
```

Warning: This is tricky, don't forget to write down you acl first in case it doesnt work

Migrate FusionDirectory from 1.0.8 to 1.0.8.1

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas.

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
gosaUnitTag          (Takes a list of relevant mime-
↳ type|priority settings)          - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType    (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags    (FusionDirectory -
↳ Honour unit tags)                - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag (Marker for objects below administrative units (v2.6.
↳ 1))                    - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit   (Marker for administrative units (v2.6.
↳ 1))                    - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldap-modify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.1 to 1.0.8.2

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses

```
gosaUnitTag          (Takes a list of relevant mime-
↳ type|priority settings)          - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType    (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags    (FusionDirectory -
↳ Honour unit tags)                - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag      (Marker for objects below administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit        (Marker for administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.15
```

- `fusiondirectory-setup --list-deprecated` show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- `fusiondirectory-setup --check-deprecated` will output an ldif file on the console that you can use with `ldapmodify` to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.2 to 1.0.8.3

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first update the FusionDirectory core schemas.

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in `fusiondirectory-setup`

- `fusiondirectory-setup --list-deprecated` List deprecated attributes and objectclasses
 Deprecated attributes:

```
gosaUnitTag                    (Takes a list of relevant mime-
↳type|priority settings)      - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType               (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags               (FusionDirectory -
↳ Honour unit tags)           - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag      (Marker for objects below administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit        (Marker for administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.3 to 1.0.8.4

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
gosaUnitTag                    (Takes a list of relevant mime-
↳type|priority settings)      - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType               (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags              (FusionDirectory -
↳ Honour unit tags)          - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag      (Marker for objects below administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit        (Marker for administrative units (v2.6.
↳1))      - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldap-modify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.4 to 1.0.8.5

Remove the deprecated plugins

The dashboard plugin has been integrated to the core so it must be removed.

```
apt-get --purge remove fusiondirectory-plugin-dashboard
```

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first remove the dashboard configuration schema.

```
fusiondirectory-insert-schema -e dashboard-fd-conf
Are you sure you want to empty schema(s) dashboard-fd-conf?
[Yes/No]? Yes
```

Then update the core-fd-conf schema.

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

If you are using the debconf plugin update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/debconf.schema
```

If you are using the fai plugin update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/fai.schema
```

If you are using the mail plugin update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/mail-fd.schema`
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses

```
gosaUnitTag (Takes a list of relevant mime-
↳ type|priority settings) - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags (FusionDirectory -
↳ Honour unit tags) - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag (Marker for objects below administrative units (v2.6.
↳ 1)) - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit (Marker for administrative units (v2.6.
↳ 1)) - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldap-modify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.5 to 1.0.8.6

Removal of the mixed posixAccount / groupOfNames aka rfc2307bis

Warning: This was done to be more respectful of standard and not change the core openldap schema, but it seems to be causing trouble on some install, so if you use it **don't upgrade to 1.0.8.6 and wait for 1.0.8.7 !!!**

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Migrate FusionDirectory from 1.0.8.6 to 1.0.8.7

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

You have to update your LDAP schemas, first remove the dashboard configuration schema.

```
fusiondirectory-insert-schema -e dashboard-fd-conf
Are you sure you want to empty schema(s) dashboard-fd-conf?
[Yes/No]? Yes
```

Then update the core-fd-conf schema.

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.
↪ schema`
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
gosaUnitTag (Takes a list of relevant mime-
↪ type|priority settings) - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType (Takes either undo or snapshot)
↪ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags (FusionDirectory -
↪ Honour unit tags) - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag (Marker for objects below administrative units (v2.6.
↪ 1)) - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit (Marker for administrative units (v2.6.
↪ 1)) - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.7 to 1.0.8.8

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Nothing to do

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
gosaUnitTag          (Takes a list of relevant mime-  
→ type|priority settings)          - 1.3.6.1.4.1.10098.1.1.12.33  
gosaSnapshotType    (Takes either undo or snapshot)  
→ 1.3.6.1.4.1.10098.1.1.12.36  
fdHonourUnitTags    (FusionDirectory -  
→ Honour unit tags)                - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag (Marker for objects below administrative units (v2.6.  
→ 1))          - 1.3.6.1.4.1.10098.1.2.1.19.16  
gosaAdministrativeUnit   (Marker for administrative units (v2.6.  
→ 1))          - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated  
List LDAP entries using deprecated attributes or objectclasses  
There are no entries in the LDAP using obsolete attributes  
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldap-modify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.8 to 1.0.8.9

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:


```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the argonaut.schema if you use the argonaut plugin

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema``
```

Check for deprecated attributes and objectClasses in your LDAP

since FusionDirectory 1.0.8.1 two new options are in fusiondirectory-setup

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
gosaUnitTag          (Takes a list of relevant mime-
↳ type|priority settings)          - 1.3.6.1.4.1.10098.1.1.12.33
gosaSnapshotType     (Takes either undo or snapshot)
↳ 1.3.6.1.4.1.10098.1.1.12.36
fdHonourUnitTags     (FusionDirectory -
↳ Honour unit tags)                - 1.3.6.1.4.1.38414.8.14.3
```

Deprecated objectClasses:

```
gosaAdministrativeUnitTag (Marker for objects below administrative units (v2.6.
↳ 1))                    - 1.3.6.1.4.1.10098.1.2.1.19.16
gosaAdministrativeUnit   (Marker for administrative units (v2.6.
↳ 1))                    - 1.3.6.1.4.1.10098.1.2.1.19.15
```

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

- **fusiondirectory-setup --check-deprecated** will output an ldif file on the console that you can use with ldap-modify to clean you ldap server from old attributes and objectClasses

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.8.9 to 1.0.9

Backup you template First

The template system has been completely rewritten, and the old template will not be converted, so you need to backup them, remove them from FusionDirectory and then redo them.

The new system is much cleaner because template are stored in they own branch now and are the basis for having template for the whole application in the future.

Backup your phones

You must backup all your phones in a LDIF and remove them. Modify your LDIF like below:

Before

```
cn=namePhone,ou=phones,ou=systems,dc=fusiondirectory,dc=org
cn: namePhone
goFonType: friend
goFonDmtfMode: inband
goFonDefaultIP:
dynamic ipHostNumber: 127.0.0.1
macAddress: 00:0C:7F:31:33:F1
objectClass: top
```

After

```
cn=namePhone,ou=phones,ou=systems,dc=fusiondirectory,dc=org
cn: namePhone
ipHostNumber: 127.0.0.1
macAddress: 00:0C:7F:31:33:F1
objectClass: fdPhone
objectClass: device
objectClass: ieee802Device
objectClass: ipHost
```

After the migration you may insert your phone again in your LDAP.

You can use the next command to backup your phones

```
ldapsearch -xLLL -b ou=phones,ou=systems,dc=fusiondirectory,dc=org > backupPhones.ldif
```

Moved Attributes

We cleaned the core of FusionDirectory to only use classical attributes and objectClass, so the FusionDirectory special attributes on the first page of FusionDirectory are now managed by the personal plugin.

The personal plugin has been made to manage all kind of personal data and is best suited to contain those data not normalized. So if you use **personalTitle**, **dateOfBirth**, **gender** you will need to install the personal plugin.

Upgrade FusionDirectory

Upgrade FusionDirectory core package before other ones to avoid dependencies errors

Debian

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

RPM

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
yum remove fusiondirectory
yum install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
yum remove fusiondirectory-schema
yum install fusiondirectory-schema
```

There is a new schema for the templates, so you need to run

```
fusiondirectory-insert-schema
```

Removed obsolete plugins

In this version we removed obsolete plugin, because they were based on software no longer existing or needed an sql backend and we decided they need to be rewritten using the now ldap backend of those softwares :

- **asterisk** : old plugin not maintainable anymore based on the sql backend, but now asterisk has an ldap backend has well.
- **fax** : old code based on the gofax software from gonicus, not maintained anymore upstream.
- **openstack-compute** : openstack management interface changed and this plugin is no longer relevant
- **uw-imap** : long gone imap server, nobody that we know still use it

They are no longer supported and should be removed from your installation

New Plugin for peoples using a mix of groupOfNames and posixGroup on the same object

We cleaned the code of FusionDirectory and by default it make posixGroup or clean standard compliant groupOfNames. If you need a mix of groupOfNames and posixGroup on the same object you will need to install a new plugin called mixedgroups.

Warning: Please take note that this plugin is for special cases and need modified core schema. !!

If you need to have a link between user and groups you are better using the standard compliant groupOfNames or roles for examples for web applications.

```
apt-get install fusiondirectory-plugin-mixedgroups
```

Upgrade of LDAP directory

Upgrade Core FusionDirectory Schema

The password recovery schema has been migrated into the core schema so you must remove it first

```
fusiondirectory-insert-schema -e recovery-fd
Are you sure you want to empty schema(s) recovery-fd?
[Yes/No]? Yes
```

Upgrade the core-fd.schema and core-fd-conf.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

If you use the argonaut plugin, upgrade the argonaut.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema
```

If you use the fai plugin, upgrade the fai-fd-conf.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/fai-fd-conf.schema
```

If you use the mail plugin, upgrade the mail-fd.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/mail-fd.schema
```

If you use the personal plugin, upgrade the personal-fd.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/personal-fd.schema
```

If you use the squid plugin, upgrade the proxy-fd.schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/proxy-fd.schema``
```

If you use the system plugin, upgrade the service-fd.schema, systems-fd.schema, systems-fd-conf.schema

The Phone object has been migrated to the system plugin due to the removal of the asterisk plugin.

```
fusiondirectory-insert-schema -e asterisk-fd-conf
Are you sure you want to empty schema(s) asterisk-fd-conf?
[Yes/No]? Yes
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd-conf.
↪schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema
```

Check for deprecated attributes and objectClasses in your LDAP

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```

fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses.
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)   - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook             (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI              (FusionDirectory -
↳ Snaphost URI)            - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                 (Goto - Gonicus Terminal Concept, value xVsync.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter             (Hardware definitions,
↳ value soundAdapter)      - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport             (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor               (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath              (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients         (Goto - Gonicus Terminal Concept,
↳ value scannerClients.)   - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum       (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd            (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout              (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer          (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN              (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable         (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter               (Hardware definitions,
↳ value Grafikkarte)       - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath               (Goto - Gonicus Terminal Concept, value fontPath.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                  (Hardware definitions,
↳ value ideDev)            - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable              (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant             (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis              (FusionDirectory -
↳ rfc2307bis)              - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs                 (Goto - Gonicus Terminal Concept, value autofS.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule              (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable            (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel           (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                          - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction       (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``

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```

gotoXColordepth          (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle           (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn       (FusionDirectory -
↳ Snapshot admin dn)     - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem          (Goto - Gonicus Terminal Concept, value filesystem.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber       (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosasubtreeACL          (Gosa -
↳ ACL entry)             - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator           (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport            (Hardware definitions,
↳ value usbSupport)     - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus           (Keeps current system status -
↳ info shown in Gosa)   - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste             (FusionDirectory - (de)Activate copy/
↳paste)                  - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver             (Goto - Gonicus Terminal Concept, value xDriver.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel            (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN    (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer           (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync              (Goto - Gonicus Terminal Concept, value xHsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags        (Goto - Flags for Profile handling -
↳ C is for caching)     - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType              (Hardware definitions,
↳ value cpuType)        - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution         (Goto - Gonicus Terminal Concept, value xResolution.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare               (Goto -
↳ specifies a share)    - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend      (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshot admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosadefaultLanguage     (Gosa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize               (Hardware definitions,
↳ value memSize)        - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (Goto -
↳ save quota for home)  - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts           (FusionDirectory -
↳ available sip contexts) - 1.3.6.1.4.1.38414.19.11.

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```

fdPhoneConferenceRDN      (FusionDirectory -
↳ Phone conference RDN)      - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev                  (Hardware definitions,
↳ value scsiDev)              - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN           (FusionDirectory -
↳ Phone macro RDN)           - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic                   (Hardware definitions,
↳ value Network Device)      - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable           (Goto - Gonicus Terminal Concept, value floppyEnable.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton          (Goto - Gonicus Terminal Concept, value xMouseButton.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType             (Hardware definitions,
↳ value Type of mouse)       - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer               (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry             (GOsa -
↳ Class for GOsa caching)      - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate           (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount                (GOsa -
↳ Class for GOsa Accounts)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject                 (GOsa -
↳ Class for GOsa settings)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

- **fusiondirectory-setup --check-deprecated** will output a list of dn using old attributes and objectClasses

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
cn=fusiondirectory,ou=configs,dc=fusiondirectory,dc=org contains an obsolete attribute
cn=fusiondirectory,ou=configs,dc=fusiondirectory,dc=org uses the obsolete object_
↳class fdAsteriskPluginConf
uid=fd-admin,ou=people,dc=fusiondirectory,dc=org uses the obsolete object class_
↳gosaAccount

```

- **fusiondirectory-setup --ldif-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes. If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

```
fusiondirectory-setup --ldif-deprecated
```

```

dn:cn=fusiondirectory,ou=configs,dc=fusiondirectory,dc=org
changetype:modify delete:fdRfc2307bis
-
delete:fdCopyPaste
-

WARNING: There are entries in the LDAP using obsolete classes, you need to edit them_
↳manually

```

Warning: Please read it carefully before applying !!

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf**

Problems when we removing objectClasses

When you remove gosaAccount you can have some troubles.

If you have samba plugin installed you must remove the next attributes on the users where the samba tab is not activate.

- sambaBadPasswordTime
- sambaBadPasswordCount
- sambaNTPassword
- sambaPwdLastSet

If you use argonaut client tab on some objets

To add the new attribute argonautClientProtocol, you must only open the objets that have an argonaut client tab and save it again.

Migrate FusionDirectory from 1.0.9 to 1.0.9.1

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Insert the core template schema

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/template-fd.schema``
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory -
↳ Snaohost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)    - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients       (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout            (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer        (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN             (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable        (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter             (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath             (Goto - Gonicus Terminal Concept, value fontPath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                 (Hardware definitions,
↳ value ideDev)         - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable            (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant           (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis            (FusionDirectory -
↳ rfc2307bis)          - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs               (Goto - Gonicus Terminal Concept, value autofS.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule            (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable          (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.8``
```

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```

gotoScannerModel      (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction  (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth       (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle        (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn     (FusionDirectory -
↳ Snapshost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem        (Goto - Gonicus Terminal Concept, value filesystem.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber    (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL        (Gosa -
↳ ACL entry)          - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator         (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport          (Hardware definitions,
↳ value usbSupport)   - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus         (Keeps current system status -
↳ info shown in Gosa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste)               - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver           (Goto - Gonicus Terminal Concept, value xDriver.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel          (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN  (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer         (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags     (Goto - Flags for Profile handling -
↳ C is for caching)   - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)      - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution       (Goto - Gonicus Terminal Concept, value xResolution.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share)   - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend   (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts  (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage  (Gosa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize            (Hardware definitions,
↳ value memSize)      - 1.3.6.1.4.1.10098.1.1.2.2` (continues on next page)

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```

gotoProfileQuota          (Goto -
↳ save quota for home)          - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts            (FusionDirectory -
↳ available sip contexts)      - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN     (FusionDirectory -
↳ Phone conference RDN)       - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev                (Hardware definitions,
↳ value scsiDev)              - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN         (FusionDirectory -
↳ Phone macro RDN)           - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic                 (Hardware definitions,
↳ value Network Device)      - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable         (Goto - Gonicus Terminal Concept, value floppyEnable.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton        (Goto - Gonicus Terminal Concept, value xMouseButton.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType          (Hardware definitions,
↳ value Type of mouse)       - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer              (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosacacheEntry           (GOsa -
↳ Class for GOsa caching)      - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosatemplate             (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaccount               (GOsa -
↳ Class for GOsa Accounts)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosobject                (GOsa -
↳ Class for GOsa settings)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

- **fusiondirectory-setup --check-deprecated** will output a list of dn using old attributes and objectClasses

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes

```

- **fusiondirectory-setup --ldif-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.9.1 to 1.0.9.2

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Removed obsolete plugins

In this version we removed obsolete plugin, because they where based on software no longer existing or needed an sql backend and we decided they need to be rewritten using the now ldap backend of those softwares :

- **rsyslog** : old plugin not maintainable anymore based on the sql backend, and we don't want to manage sql backend in FusionDirectory anymore
- **Database-connector** [sql abstraction code no longer needed now] that rsyslog plugin is removed

They are no longer supported and should be removed from your installation

```
apt-get remove fusiondirectory-plugin-rsyslog
apt-get remove fusiondirectory-plugin-database-connector
```

Upgrade of LDAP directory

Upgrade the core template schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema ``
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.
↪schema ``
```

if your are using the fusioninventory plugin you have to update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/inventory-fd.
↪schema ``
```

if your are using the supann plugin you have to update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/supann-fd.conf`
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory -
↳ Snaphost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)    - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout            (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer         (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN              (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable        (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter              (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath              (Goto - Gonicus Terminal Concept, value fontPath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                  (Hardware definitions,
↳ value ideDev)          - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable             (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.9``
```

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```

gotoXKbVariant          (Goto - Gonicus Terminal Concept, value xKbvariant.
↳) - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis           (FusionDirectory -
↳ rfc2307bis) - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs            (Goto - Gonicus Terminal Concept, value autofs.
↳) - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule         (Goto - Gonicus Terminal Concept, value sound Modules.
↳) - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable       (Goto - Gonicus Terminal Concept, value cdromEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel      (Goto - Gonicus Terminal Concept, value scannerModel.
↳) - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction  (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth       (Goto - Gonicus Terminal Concept, value xColordepth.
↳) - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle        (Field to represent the academic title) -
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn     (FusionDirectory -
↳ Snaphost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem        (Goto - Gonicus Terminal Concept, value filesystem.
↳) - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber    (Unique number for inclusion in an inventory) -
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL        (Gosa -
↳ ACL entry) - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator         (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport          (Hardware definitions,
↳ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus         (Keeps current system status -
↳ info shown in GOsa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste) - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver           (Goto - Gonicus Terminal Concept, value xDriver.
↳) - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel         (Goto - Gonicus Terminal Concept, value xKbmodel.
↳) - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN  (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer        (Goto - Gonicus Terminal Concept, value lpdServer.
↳) - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳) - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags     (Goto - Flags for Profile handling -
↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType) - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution      (Goto - Gonicus Terminal Concept, value xResolution.
↳) - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.11.
↳9``

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```

gotoScannerBackend      (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snaphost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage     (GOsa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize               (Hardware definitions,
↳ value memSize) - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (Goto -
↳ save quota for home) - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts          (FusionDirectory -
↳ available sip contexts) - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN    (FusionDirectory -
↳ Phone conference RDN) - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev              (Hardware definitions,
↳ value scsiDev) - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN        (FusionDirectory -
↳ Phone macro RDN) - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic               (Hardware definitions,
↳ value Network Device) - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable        (Goto - Gonicus Terminal Concept, value floppyEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton       (Goto - Gonicus Terminal Concept, value xMouseButton.
↳) - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType          (Hardware definitions,
↳ value Type of mouse) - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer            (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry         (GOsa -
↳ Class for GOsa caching) - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate       (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount            (GOsa -
↳ Class for GOsa Accounts) - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject             (GOsa -
↳ Class for GOsa settings) - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

- **fusiondirectory-setup --check-deprecated** will output a list of dn using old attributes and objectClasses

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes

```

- **fusiondirectory-setup --ldif-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.9.2 to 1.0.9.3

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core configuration schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

if your are using the system plugin you have to update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema
```

if your are using the repository plugin you have to update his schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/repository-fd.schema
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI            (FusionDirectory -
↳ Snaohost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)    - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout             (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer         (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN              (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable         (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter              (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath              (Goto - Gonicus Terminal Concept, value fontPath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                  (Hardware definitions,
↳ value ideDev)         - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable             (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant            (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis             (FusionDirectory -
↳ rfc2307bis)           - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs                (Goto - Gonicus Terminal Concept, value autofs.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule             (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable           (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.8``
```

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```

gotoScannerModel      (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction  (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth       (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle        (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn     (FusionDirectory -
↳ Snapshost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem        (Goto - Gonicus Terminal Concept, value filesystem.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber    (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL        (Gosa -
↳ ACL entry)          - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator         (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport          (Hardware definitions,
↳ value usbSupport)   - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus         (Keeps current system status -
↳ info shown in GOsa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste)               - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver           (Goto - Gonicus Terminal Concept, value xDriver.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel          (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN  (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer         (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags      (Goto - Flags for Profile handling -
↳ C is for caching)   - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)      - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution       (Goto - Gonicus Terminal Concept, value xResolution.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share)   - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend    (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts  (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage  (Gosa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize            (Hardware definitions,
↳ value memSize)      - 1.3.6.1.4.1.10098.1.1.2.2` (continues on next page)

```

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```

gotoProfileQuota          (Goto -
↳ save quota for home)          - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts            (FusionDirectory -
↳ available sip contexts)      - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN     (FusionDirectory -
↳ Phone conference RDN)       - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev                (Hardware definitions,
↳ value scsiDev)              - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN         (FusionDirectory -
↳ Phone macro RDN)           - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic                (Hardware definitions,
↳ value Network Device)      - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable         (Goto - Gonicus Terminal Concept, value floppyEnable.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton        (Goto - Gonicus Terminal Concept, value xMouseButton.
↳)                            - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType          (Hardware definitions,
↳ value Type of mouse)       - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer             (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry          (GOsa -
↳ Class for GOsa caching)      - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate        (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount             (GOsa -
↳ Class for GOsa Accounts)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject              (GOsa -
↳ Class for GOsa settings)     - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

- **fusiondirectory-setup --check-deprecated** will output a list of dn using old attributes and objectClasses

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes

```

- **fusiondirectory-setup --ldif-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.9.3 to 1.0.10

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core configuration schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

if your are using the personal plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/personal-fd.schema
```

if your are using the system plugin you have to update its schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd-conf.  
↪ schema
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema
```

if your are using the dns plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/dns-fd-conf.schema
```

and install a new schema

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dns-fd.schema
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

- **fusiondirectory-setup --list-deprecated** List deprecated attributes and objectclasses
Deprecated attributes:

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules (Goto - Gonicus Terminal Concept,
↳ value kernel modules.) - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI (FusionDirectory -
↳ Snapost URI) - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync (Goto - Gonicus Terminal Concept, value xVsync.
↳) - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter (Hardware definitions,
↳ value soundAdapter) - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport (Goto - Gonicus Terminal Concept, value xMouseport.
↳) - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor (Goto - Gonicus Terminal Concept, value xMonitor.
↳) - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath (Goto - Gonicus Terminal Concept, value adaptpath.
↳) - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd (Goto - Gonicus Terminal Concept, value rootPasswd.
↳) - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout (Goto - Gonicus Terminal Concept, value xKblayout.
↳) - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable (Goto - Gonicus Terminal Concept, value scannerEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter (Hardware definitions,
↳ value Grafikkarte) - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath (Goto - Gonicus Terminal Concept, value fontPath.
↳) - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev (Hardware definitions,
↳ value ideDev) - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable (Goto - Gonicus Terminal Concept, value lpdEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant (Goto - Gonicus Terminal Concept, value xKbvariant.
↳) - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis (FusionDirectory -
↳ rfc2307bis) 1.3.6.1.4.1.38414.8.10.1``
```

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```

gotoAutoFs          (Goto - Gonicus Terminal Concept, value autofS.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule       (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable     (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel    (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalued attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth     (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle      (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn   (FusionDirectory -
↳ Snapshot admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem      (Goto - Gonicus Terminal Concept, value filesystem.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber  (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL      (Gosa -
↳ ACL entry) - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator       (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport        (Hardware definitions,
↳ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus       (Keeps current system status -
↳ info shown in Gosa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste         (FusionDirectory - (de)Activate copy/
↳paste) - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver         (Goto - Gonicus Terminal Concept, value xDriver.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel        (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer       (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync          (Goto - Gonicus Terminal Concept, value xHsync.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags    (Goto - Flags for Profile handling -
↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType           (Hardware definitions,
↳ value cpuType) - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution     (Goto - Gonicus Terminal Concept, value xResolution.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare           (Goto -
↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend  (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshot admin password) - 1.3.6.1.4.1.38414.8.17.5``

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```

fdVoicemailContexts      (FusionDirectory -
↳ available voicemail contexts)      - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage      (GOsa -
↳ Defines the default language for a user)      - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize                (Hardware definitions,
↳ value memSize)                - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (GOto -
↳ save quota for home)        - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts           (FusionDirectory -
↳ available sip contexts)           - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN    (FusionDirectory -
↳ Phone conference RDN)            - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev               (Hardware definitions,
↳ value scsiDev)               - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN        (FusionDirectory -
↳ Phone macro RDN)              - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic               (Hardware definitions,
↳ value Network Device)          - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable        (GOto - Gonicus Terminal Concept, value floppyEnable.
↳)                                - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton       (GOto - Gonicus Terminal Concept, value xMouseButton.
↳)                                - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType         (Hardware definitions,
↳ value Type of mouse)         - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer            (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry         (GOsa -
↳ Class for GOsa caching)         - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate       (GOsa -
↳ Class for GOsa User Templates)   - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount            (GOsa -
↳ Class for GOsa Accounts)        - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject             (GOsa -
↳ Class for GOsa settings)        - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

- **fusiondirectory-setup --check-deprecated** will output a list of dn using old attributes and objectClasses

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes

```

- **fusiondirectory-setup --ldif-deprecated** will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.10 to 1.0.11

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Migrate FusionDirectory from 1.0.11 to 1.0.12

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Mail

In this version the mail plugin has been cleaned and his dependency to the systems has been removed. In the mean time the postfix and spamassassin service have been moved in their own plugins. The antivirus service have been removed.

The old spamassassin settings from the mail user tab have been rewritten and moved to a spamassassin plugin, they now support the real LDAP backend of spamassassin. So you will need to move your data to the new format before using them.

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

if your are using the mail plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/mail-fd.schema
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/mail-fd-conf.schema
```

if your are using the system plugin you have to update its schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema
```

Postfix plugin

if you where using the postfix service in 1.0.11, you need to install the postfix plugin and insert the postfix schema

```
apt-get install fusiondirectory-plugin-postfix
```

```
apt-get install fusiondirectory-plugin-postfix-schema
```

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/postfix-fd.schema` `
```

spamassassin plugin

if you where using the spamassassin service in 1.0.11, you need to install the spamassassin plugin and insert the spamassassin schema

```
apt-get install fusiondirectory-plugin-spamassassin
```

```
apt-get install fusiondirectory-plugin-spamassassin-schema
```

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/spamassassin-fd.  
↪schema
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory -
↳ Snaphost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)     - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients       (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout            (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer        (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN             (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable        (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter             (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath             (Goto - Gonicus Terminal Concept, value fontPath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                 (Hardware definitions,
↳ value ideDev)         - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable            (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant           (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis            (FusionDirectory -
↳ rfc2307bis)          - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs              (Goto - Gonicus Terminal Concept, value autofS.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule            (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.29``
```

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```

gotoCdromEnable          (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)          - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel        (Goto - Gonicus Terminal Concept, value scannerModel.
↳)          - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction    (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth         (Goto - Gonicus Terminal Concept, value xColordepth.
↳)          - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle          (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn       (FusionDirectory -
↳ Snapshost admin dn)          - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem          (Goto - Gonicus Terminal Concept, value filesystem.
↳)          - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber      (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL          (Gosa -
↳ ACL entry)                  - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator           (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport            (Hardware definitions,
↳ value usbSupport)          - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus           (Keeps current system status -
↳ info shown in Gosa)        - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste             (FusionDirectory - (de)Activate copy/
↳paste)                      - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver             (Goto - Gonicus Terminal Concept, value xDriver.
↳)          - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel            (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)          - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN     (FusionDirectory -
↳ Personal title in dn)      - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer           (Goto - Gonicus Terminal Concept, value lpdServer.
↳)          - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync              (Goto - Gonicus Terminal Concept, value xHsync.
↳)          - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags        (Goto - Flags for Profile handling -
↳ C is for caching)          - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType              (Hardware definitions,
↳ value cpuType)            - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution         (Goto - Gonicus Terminal Concept, value xResolution.
↳)          - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare               (Goto -
↳ specifies a share)         - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend      (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.)    - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage     (Gosa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``

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ghMemSize	(Hardware definitions,
↪ value memSize)	- 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota	(Goto -
↪ save quota for home)	- 1.3.6.1.4.1.10098.1.1.11.
↪15``	
fdSipContexts	(FusionDirectory -
↪ available sip contexts)	- 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN	(FusionDirectory -
↪ Phone conference RDN)	- 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev	(Hardware definitions,
↪ value scsiDev)	- 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN	(FusionDirectory -
↪ Phone macro RDN)	- 1.3.6.1.4.1.38414.19.10.2``
ghNetNic	(Hardware definitions,
↪ value Network Device)	- 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable.
↪)	- 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton.
↪)	- 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType	(Hardware definitions,
↪ value Type of mouse)	- 1.3.6.1.4.1.10098.1.1.1.34``

Deprecated objectClasses:

goCupsServer	(CUPS server description)
↪ 1.3.6.1.4.1.10098.1.2.1.23``	
gosaCacheEntry	(Gosa -
↪ Class for GOSA caching)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.3``	
gosaUserTemplate	(Gosa -
↪ Class for GOSA User Templates)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.11``	
gosaAccount	(Gosa -
↪ Class for GOSA Accounts)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.6``	
gosaObject	(Gosa -
↪ Class for GOSA settings)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.1``	

The **check-deprecated** option will output a list of dn using old attributes and objectClasses of they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.12 to 1.0.13

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

if your are using the alias plugin you have to update its schema

```
fusiondirectory-insert-schema-m /etc/ldap/schema/fusiondirectory/alias-fd.schema``
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↪Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↪ value kernel modules.)   - 1.3.6.1.4.1.10098.1.1.1.32``
```

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```

fdPasswordHook                (FusionDirectory -
↳ Password hook (external command))          - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI                 (FusionDirectory -
↳ Snaphost URI)                             - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                    (Goto - Gonicus Terminal Concept, value xVsync.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter                (Hardware definitions,
↳ value soundAdapter)                       - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport                (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor                  (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath                 (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients            (Goto - Gonicus Terminal Concept,
↳ value scannerClients.)                   - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum          (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd               (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout                 (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer             (Goto -
↳ specifies the profile server)              - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN                  (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable             (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter                  (Hardware definitions,
↳ value Grafikkarte)                       - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath                  (Goto - Gonicus Terminal Concept, value fontPath.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                       (Hardware definitions,
↳ value ideDev)                             - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable                 (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant                (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis                  (FusionDirectory -
↳ rfc2307bis)                               - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs                    (Goto - Gonicus Terminal Concept, value autofs.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule                 (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable               (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel              (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction          (Gosa -
↳ Multivalued attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth               (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                                           - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle                (Field to represent the academic title) (continues on next page)
↳ 1.3.6.1.4.1.10098.1.1.6.2``

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fdSnapshotAdminDn          (FusionDirectory -
↳ Snapshost admin dn)          - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem             (Goto - Gonicus Terminal Concept, value filesystem.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber         (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL             (Gosa -
↳ ACL entry)                   - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator              (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport               (Hardware definitions,
↳ value usbSupport)           - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus              (Keeps current system status -
↳ info shown in Gosa)         - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste                (FusionDirectory - (de)Activate copy/
↳ paste)                       - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver                (Goto - Gonicus Terminal Concept, value xDriver.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel               (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN        (FusionDirectory -
↳ Personal title in dn)        - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer              (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync                 (Goto - Gonicus Terminal Concept, value xHsync.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags           (Goto - Flags for Profile handling -
↳ C is for caching)           - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType                  (Hardware definitions,
↳ value cpuType)              - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution            (Goto - Gonicus Terminal Concept, value xResolution.
↳)                             - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare                  (Goto -
↳ specifies a share)           - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend         (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.)      - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword    (FusionDirectory -
↳ Snapshost admin password)    - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts        (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage        (Gosa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize                  (Hardware definitions,
↳ value memSize)              - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota           (Goto -
↳ save quota for home)         - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts              (FusionDirectory -
↳ available sip contexts)      - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN       (FusionDirectory -
↳ Phone conference RDN)        - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev                  (Hardware definitions,
↳ value scsiDev)              - 1.3.6.1.4.1.10098.1.1.2.5``

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fdPhoneMacroRDN	(FusionDirectory -
↪ Phone macro RDN)	- 1.3.6.1.4.1.38414.19.10.2``
ghNetNic	(Hardware definitions,
↪ value Network Device)	- 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable.
↪)	- 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton.
↪)	- 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType	(Hardware definitions,
↪ value Type of mouse)	- 1.3.6.1.4.1.10098.1.1.1.34``

Deprecated objectClasses:

goCupsServer	(CUPS server description)
↪ 1.3.6.1.4.1.10098.1.2.1.23``	
gosaCacheEntry	(Gosa -
↪ Class for Gosa caching)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.3``	
gosaUserTemplate	(Gosa -
↪ Class for Gosa User Templates)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.11``	
gosaAccount	(Gosa -
↪ Class for Gosa Accounts)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.6``	
gosaObject	(Gosa -
↪ Class for Gosa settings)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.1``	

The **check-deprecated** option will output a list of dn using old attributes and objectClasses of they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup -check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.13 to 1.0.14

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Plugin deprecated

The game plugin as been removed in this version

Upgrade of LDAP directory

if your are using the community plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/community-fd.  
↪schema``
```

if your are using the systems plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema``
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses.
↳Deprecated attributes:
```

```
gotoModules (Goto - Gonicus Terminal Concept,
↳ value kernel modules.) - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI (FusionDirectory -
↳ Snaphost URI) - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync (Goto - Gonicus Terminal Concept, value xVsync.
↳) - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter (Hardware definitions,
↳ value soundAdapter) - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport (Goto - Gonicus Terminal Concept, value xMouseport.
↳) - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor (Goto - Gonicus Terminal Concept, value xMonitor.
↳) - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath (Goto - Gonicus Terminal Concept, value adaptpath.
↳) - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd (Goto - Gonicus Terminal Concept, value rootPasswd.
↳) - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout (Goto - Gonicus Terminal Concept, value xKblayout.
↳) - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable (Goto - Gonicus Terminal Concept, value scannerEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter (Hardware definitions,
↳ value Grafikkarte) - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath (Goto - Gonicus Terminal Concept, value fontPath.
↳) - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev (Hardware definitions,
↳ value ideDev) - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable (Goto - Gonicus Terminal Concept, value lpdEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant (Goto - Gonicus Terminal Concept, value xKbvariant.
↳) - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis (FusionDirectory -
↳ rfc2307bis) - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs (Goto - Gonicus Terminal Concept, value autofS.
↳) - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule (Goto - Gonicus Terminal Concept, value sound Modules.
↳) - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable (Goto - Gonicus Terminal Concept, value cdromEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel (Goto - Gonicus Terminal Concept, value scannerModel.
↳) - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
```

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gotoXColordepth	(Goto - Gonicus Terminal Concept, value xColordepth. ↳) - 1.3.6.1.4.1.10098.1.1.1.21``
↳	
↳academicTitle	(Field to represent the academic title) ↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn	(FusionDirectory - ↳ Snapshost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem	(Goto - Gonicus Terminal Concept, value filesystem. ↳) - 1.3.6.1.4.1.10098.1.1.1.6``
↳	
↳ghInventoryNumber	(Unique number for inclusion in an inventory) ↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosasubtreeACL	(GOsa - ↳ ACL entry) - 1.3.6.1.4.1.10098.1.1.12. ↳1``
fdIdGenerator	(FusionDirectory - ↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport	(Hardware definitions, ↳ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus	(Keeps current system status - ↳ info shown in GOsa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste	(FusionDirectory - (de)Activate copy/ ↳paste) - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver	(Goto - Gonicus Terminal Concept, value xDriver. ↳) - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel	(Goto - Gonicus Terminal Concept, value xKbmodel. ↳) - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN	(FusionDirectory - ↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer	(Goto - Gonicus Terminal Concept, value lpdServer. ↳) - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync	(Goto - Gonicus Terminal Concept, value xHsync. ↳) - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags	(Goto - Flags for Profile handling - ↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType	(Hardware definitions, ↳ value cpuType) - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution	(Goto - Gonicus Terminal Concept, value xResolution. ↳) - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare	(Goto - ↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.11. ↳9``
gotoScannerBackend	(Goto - Gonicus Terminal Concept, ↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword	(FusionDirectory - ↳ Snapshost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts	(FusionDirectory - ↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosadefaultLanguage	(GOsa - ↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12. ↳14``
ghMemSize	(Hardware definitions, ↳ value memSize) - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota	(Goto - ↳ save quota for home) - 1.3.6.1.4.1.10098.1.1.11. ↳15``
fdSipContexts	(FusionDirectory - ↳ available sip contexts) - 1.3.6.1.4.1.38414.19.11.11

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fdPhoneConferenceRDN	(FusionDirectory -
↪ Phone conference RDN)	- 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev	(Hardware definitions,
↪ value scsiDev)	- 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN	(FusionDirectory -
↪ Phone macro RDN)	- 1.3.6.1.4.1.38414.19.10.2``
ghNetNic	(Hardware definitions,
↪ value Network Device)	- 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable.
↪)	- 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton.
↪)	- 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType	(Hardware definitions,
↪ value Type of mouse)	- 1.3.6.1.4.1.10098.1.1.1.34``

Deprecated objectClasses:

goCupsServer	(CUPS server description)
↪ 1.3.6.1.4.1.10098.1.2.1.23``	
gosaCacheEntry	(GOsa -
↪ Class for GOsa caching)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.3``	
gosaUserTemplate	(GOsa -
↪ Class for GOsa User Templates)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.11``	
gosaAccount	(GOsa -
↪ Class for GOsa Accounts)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.6``	
gosaObject	(GOsa -
↪ Class for GOsa settings)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.1``	

The **check-deprecated** option will output a list of dn using old attributes and objectClasses of they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup -check-deprecated** step.

Warning: Please read it carefully before applying !!

New Breezy Theme

In this version by default there is a new more modern theme called breezy. To active it completely go to the configuration plugin, click edit and in the “Look and feel” section select breezy

Enjoy :)

Migrate FusionDirectory from 1.0.14 to 1.0.15

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Plugin deprecated

The apache2 plugin as been removed in this version

```
apt-get remove fusiondirectory-plugin-apache2
apt-get remove fusiondirectory-plugin-apache2-schema
```

After removing you apache2 data from the LDAP, you may empty the schema

```
fusiondirectory-insert-schema -e mod_vhost_ldap
```

Upgrade of LDAP directory

Upgrade the core template schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.
↪schema``
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema``
```

if your are using the systems plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema``
```

if you are using the personal plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/personal-fd.schema``
```

Remove old schema from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **recovery-fd.schema** and **asterisk-fd.conf** if they still exist

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)   - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook             (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI              (FusionDirectory -
↳ Snaphost URI)           - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                 (Goto - Gonicus Terminal Concept, value xVsync.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter             (Hardware definitions,
↳ value soundAdapter)     - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport             (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor               (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath              (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients         (Goto - Gonicus Terminal Concept,
↳ value scannerClients.)   - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum       (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd             (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout              (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer          (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN               (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable          (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter               (Hardware definitions,
↳ value Grafikkarte)       - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath               (Goto - Gonicus Terminal Concept, value fontPath.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                   (Hardware definitions,
↳ value ideDev)           - 1.3.6.1.4.1.10098.1.1.2.4`` (continues on next page)
```

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```

gotoLpdEnable          (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant         (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis          (FusionDirectory -
↳ rfc2307bis)         - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs            (Goto - Gonicus Terminal Concept, value autofS.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule         (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable       (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel     (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth      (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle       (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn    (FusionDirectory -
↳ Snaphost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem       (Goto - Gonicus Terminal Concept, value filesystem.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber   (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL       (Gosa -
↳ ACL entry)         - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator        (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport         (Hardware definitions,
↳ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus        (Keeps current system status -
↳ info shown in GOsa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste)              - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver          (Goto - Gonicus Terminal Concept, value xDriver.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel         (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer        (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags     (Goto - Flags for Profile handling -
↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)     - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution      (Goto - Gonicus Terminal Concept, value xResolution.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.1.11``
↳9``

```

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```

gotoScannerBackend      (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snaphost admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage     (GOsa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize               (Hardware definitions,
↳ value memSize) - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (Goto -
↳ save quota for home) - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts          (FusionDirectory -
↳ available sip contexts) - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN    (FusionDirectory -
↳ Phone conference RDN) - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev              (Hardware definitions,
↳ value scsiDev) - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN        (FusionDirectory -
↳ Phone macro RDN) - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic               (Hardware definitions,
↳ value Network Device) - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable        (Goto - Gonicus Terminal Concept, value floppyEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton       (Goto - Gonicus Terminal Concept, value xMouseButton.
↳) - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType         (Hardware definitions,
↳ value Type of mouse) - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer            (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry         (GOsa -
↳ Class for GOsa caching) - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate       (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount            (GOsa -
↳ Class for GOsa Accounts) - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject             (GOsa -
↳ Class for GOsa settings) - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

The **check-deprecated** option will output a list of dn using old attributes and objectClasses if they are present in your ldap server

```

fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes

```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean your ldap

server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup -check-deprecated** step.

Warning: Please read it carefully before applying !!

Hook

You must modify your hook so that they don't use quotes. The attributes are now automatically quotes and escape.

New Breezy Theme

In this version by default there is a new more modern theme called breezy. To active it completely go to the configuration plugin, click edit and in the "Look and feel" section select breezy

Enjoy :)

Migrate FusionDirectory from 1.0.15 to 1.0.16

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
```

The lock attribute and objectClass has been changed so you need to run `fusiondirectory-setup --delete-gosa-locks` to remove them

```
fusiondirectory-setup --delete-gosa-locks
Delete lock tokens using old gosaLockEntry class
Deleted lock 'cn=df0c0960f4202f794a331f07f3fbcccd,ou=locks,ou=fusiondirectory,dc=org'
Deleted lock 'cn=157dc41f15328c6ae3f1a2542c0dd481,ou=locks,ou=fusiondirectory,dc=org'
```

Check for deprecated attributes and objectClasses in your LDAP

The `list-deprecated` option of `fusiondirectory-setup` show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses.
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory -
↳ Snaphost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)     - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout            (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer        (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN             (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable        (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter             (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
```

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```

gotoFontPath          (Goto - Gonicus Terminal Concept, value fontPath.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev              (Hardware definitions,
↳ value ideDev)       - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable        (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant       (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis         (FusionDirectory -
↳ rfc2307bis)         - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs           (Goto - Gonicus Terminal Concept, value autofS.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule        (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable      (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel     (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth      (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.21``

↳
↳academicTitle       (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn   (FusionDirectory -
↳ Snaphost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem       (Goto - Gonicus Terminal Concept, value filesystem.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.6``

↳
↳ghInventoryNumber   (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL       (Gosa -
↳ ACL entry)          - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator        (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport         (Hardware definitions,
↳ value usbSupport)   - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus        (Keeps current system status -
↳ info shown in Gosa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste)               - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver          (Goto - Gonicus Terminal Concept, value xDriver.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel         (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer        (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags     (Goto - Flags for Profile handling -
↳ C is for caching)   - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)      - 1.3.6.1.4.1.10098.1.1.2.1` (continues on next page)

```

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gotoXResolution	(Goto - Gonicus Terminal Concept, value xResolution. ↪) - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare	(Goto - ↪ specifies a share) - 1.3.6.1.4.1.10098.1.1.11. ↪9``
gotoScannerBackend	(Goto - Gonicus Terminal Concept, ↪ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword	(FusionDirectory - ↪ Snapshot admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts	(FusionDirectory - ↪ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage	(Gosa - ↪ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12. ↪14``
ghMemSize	(Hardware definitions, ↪ value memSize) - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota	(Goto - ↪ save quota for home) - 1.3.6.1.4.1.10098.1.1.11. ↪15``
fdSipContexts	(FusionDirectory - ↪ available sip contexts) - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN	(FusionDirectory - ↪ Phone conference RDN) - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev	(Hardware definitions, ↪ value scsiDev) - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN	(FusionDirectory - ↪ Phone macro RDN) - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic	(Hardware definitions, ↪ value Network Device) - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable. ↪) - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton. ↪) - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType	(Hardware definitions, ↪ value Type of mouse) - 1.3.6.1.4.1.10098.1.1.1.34``

Deprecated objectClasses:

goCupsServer	(CUPS server description) ↪ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry	(Gosa - ↪ Class for Gosa caching) - 1.3.6.1.4.1.10098.1.2.1. ↪19.3``
gosaUserTemplate	(Gosa - ↪ Class for Gosa User Templates) - 1.3.6.1.4.1.10098.1.2.1. ↪19.11``
gosaAccount	(Gosa - ↪ Class for Gosa Accounts) - 1.3.6.1.4.1.10098.1.2.1. ↪19.6``
gosaObject	(Gosa - ↪ Class for Gosa settings) - 1.3.6.1.4.1.10098.1.2.1. ↪19.1``

The **check-deprecated** option will output a list of dn using old attributes and objectClasses if they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate FusionDirectory from 1.0.16 to 1.0.17

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

if your are using the fai plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/fai.schema
```

if your are using the personal plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/personal-fd.schema
```

if your are using the dhcp plugin you have to install a new schema

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dhcp-fd-conf.schema
```

Remove old ldif from /etc/ldap/schema/fusiondirectory

The old schema are not automatically removed from /etc/ldap/schema/fusiondirectory. You can safely remove **/etc/ldap/schema/fusiondirectory/ppolicydefault.ldif**

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses.
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)  - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory -
↳ Snaphost URI)          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions,
↳ value soundAdapter)     - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout             (Goto - Gonicus Terminal Concept, value xKblayout.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer         (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN              (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable        (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter              (Hardware definitions,
↳ value Grafikkarte)     - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath              (Goto - Gonicus Terminal Concept, value fontPath.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                  (Hardware definitions,
↳ value ideDev)          - 1.3.6.1.4.1.10098.1.1.2.4``
```

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```

gotoLpdEnable          (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant        (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis          (FusionDirectory -
↳ rfc2307bis)         - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs            (Goto - Gonicus Terminal Concept, value autofS.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule         (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable       (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel     (Goto - Gonicus Terminal Concept, value scannerModel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth       (Goto - Gonicus Terminal Concept, value xColordepth.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle        (Field to represent the academic title)
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn     (FusionDirectory -
↳ Snaphost admin dn) - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem        (Goto - Gonicus Terminal Concept, value filesystem.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber    (Unique number for inclusion in an inventory)
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL        (Gosa -
↳ ACL entry)         - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator         (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport          (Hardware definitions,
↳ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus         (Keeps current system status -
↳ info shown in GOsa) - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste          (FusionDirectory - (de)Activate copy/
↳paste)              - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver           (Goto - Gonicus Terminal Concept, value xDriver.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel         (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN  (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer         (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags      (Goto - Flags for Profile handling -
↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)     - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution       (Goto - Gonicus Terminal Concept, value xResolution.
↳)                    - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.1.11
↳9``

```

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gotoScannerBackend	(Goto - Gonicus Terminal Concept,
↪ value scannerBackend.)	- 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword	(FusionDirectory -
↪ Snaphost admin password)	- 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts	(FusionDirectory -
↪ available voicemail contexts)	- 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage	(Gosa -
↪ Defines the default language for a user)	- 1.3.6.1.4.1.10098.1.1.12.
↪14``	
ghMemSize	(Hardware definitions,
↪ value memSize)	- 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota	(Goto -
↪ save quota for home)	- 1.3.6.1.4.1.10098.1.1.11.
↪15``	
fdSipContexts	(FusionDirectory -
↪ available sip contexts)	- 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN	(FusionDirectory -
↪ Phone conference RDN)	- 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev	(Hardware definitions,
↪ value scsiDev)	- 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN	(FusionDirectory -
↪ Phone macro RDN)	- 1.3.6.1.4.1.38414.19.10.2``
ghNetNic	(Hardware definitions,
↪ value Network Device)	- 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable.
↪)	- 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton.
↪)	- 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType	(Hardware definitions,
↪ value Type of mouse)	- 1.3.6.1.4.1.10098.1.1.1.34``

Deprecated objectClasses:

goCupsServer	(CUPS server description)
↪ 1.3.6.1.4.1.10098.1.2.1.23``	
gosaCacheEntry	(Gosa -
↪ Class for Gosa caching)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.3``	
gosaUserTemplate	(Gosa -
↪ Class for Gosa User Templates)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.11``	
gosaAccount	(Gosa -
↪ Class for Gosa Accounts)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.6``	
gosaObject	(Gosa -
↪ Class for Gosa settings)	- 1.3.6.1.4.1.10098.1.2.1.
↪19.1``	

The **check-deprecated** option will output a list of dn using old attributes and objectClasses of they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap

server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Migrate your DHCP entries

if you were using the DHCP plugin in 1.0.16, you need to migrate your entries to the dhcp branch, run the **fusiondirectory-setup --migrate-dhcp** for this

```
fusiondirectory-setup --migrate-dhcp
```

Checking your indexed attributes

Check that all your index still match with valid attributes present in your ldap directory

Enjoy :)

Migrate FusionDirectory from 1.0.17 to 1.0.18

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally be found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
```

Upgrade of LDAP directory

if your are using the systems plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema
```

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema
```

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses.
↳Deprecated attributes:
```

```
gotoModules          (Goto - Gonicus Terminal Concept,
↳ value kernel modules.) - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook      (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI       (FusionDirectory -
↳ Snaphost URI) - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync          (Goto - Gonicus Terminal Concept, value xVsync.
↳) - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter      (Hardware definitions,
↳ value soundAdapter) - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport      (Goto - Gonicus Terminal Concept, value xMouseport.
↳) - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor        (Goto - Gonicus Terminal Concept, value xMonitor.
↳) - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath       (Goto - Gonicus Terminal Concept, value adaptpath.
↳) - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients  (Goto - Gonicus Terminal Concept,
↳ value scannerClients.) - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
gotoRootPasswd      (Goto - Gonicus Terminal Concept, value rootPasswd.
↳) - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout       (Goto - Gonicus Terminal Concept, value xKblayout.
↳) - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer   (Goto -
↳ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11.
↳8``
fdAccountRDN        (FusionDirectory -
↳ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8.
↳12.2``
gotoScannerEnable   (Goto - Gonicus Terminal Concept, value scannerEnable.
↳) - 1.3.6.1.4.1.10098.1.1.1.10``
```

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```

ghGfxAdapter          (Hardware definitions,
↳ value Grafikkarte)          - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath          (Goto - Gonicus Terminal Concept, value fontPath.
↳)          - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev              (Hardware definitions,
↳ value ideDev)              - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable         (Goto - Gonicus Terminal Concept, value lpdEnable.
↳)          - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant        (Goto - Gonicus Terminal Concept, value xKbvariant.
↳)          - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis          (FusionDirectory -
↳ rfc2307bis)                - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs            (Goto - Gonicus Terminal Concept, value autofS.
↳)          - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule         (Goto - Gonicus Terminal Concept, value sound Modules.
↳)          - 1.3.6.1.4.1.10098.1.1.1.29``
gotoCdromEnable       (Goto - Gonicus Terminal Concept, value cdromEnable.
↳)          - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel     (Goto - Gonicus Terminal Concept, value scannerModel.
↳)          - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction (Gosa -
↳ Multivalued attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1.
↳10098.1.1.12.46``
gotoXColordepth       (Goto - Gonicus Terminal Concept, value xColordepth.
↳)          - 1.3.6.1.4.1.10098.1.1.1.21``
↳
↳academicTitle        (Field to represent the academic title)          -
↳ 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn     (FusionDirectory -
↳ Snapshot admin dn)        - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem        (Goto - Gonicus Terminal Concept, value filesystem.
↳)          - 1.3.6.1.4.1.10098.1.1.1.6``
↳
↳ghInventoryNumber    (Unique number for inclusion in an inventory)          -
↳ 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL        (Gosa -
↳ ACL entry)              - 1.3.6.1.4.1.10098.1.1.12.
↳1``
fdIdGenerator         (FusionDirectory -
↳ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport          (Hardware definitions,
↳ value usbSupport)        - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus         (Keeps current system status -
↳ info shown in Gosa)      - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste           (FusionDirectory - (de)Activate copy/
↳ paste)                  - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver           (Goto - Gonicus Terminal Concept, value xDriver.
↳)          - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel          (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)          - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN   (FusionDirectory -
↳ Personal title in dn)    - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer         (Goto - Gonicus Terminal Concept, value lpdServer.
↳)          - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync            (Goto - Gonicus Terminal Concept, value xHsync.
↳)          - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags      (Goto - Flags for Profile handling -
↳ C is for caching)        - 1.3.6.1.4.1.10098.1.1.11.7``

```

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```

ghCpuType                (Hardware definitions,
↳ value cpuType)                - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution          (Goto - Gonicus Terminal Concept, value xResolution.
↳)                - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare                (Goto -
↳ specifies a share)                - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend      (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.)        - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshot admin password)        - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory -
↳ available voicemail contexts)    - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage     (GOsa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize               (Hardware definitions,
↳ value memSize)                - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (Goto -
↳ save quota for home)            - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts          (FusionDirectory -
↳ available sip contexts)        - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN   (FusionDirectory -
↳ Phone conference RDN)          - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev              (Hardware definitions,
↳ value scsiDev)                - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN        (FusionDirectory -
↳ Phone macro RDN)              - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic               (Hardware definitions,
↳ value Network Device)          - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable       (Goto - Gonicus Terminal Concept, value floppyEnable.
↳)                - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton       (Goto - Gonicus Terminal Concept, value xMouseButton.
↳)                - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseType         (Hardware definitions,
↳ value Type of mouse)          - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer            (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry         (GOsa -
↳ Class for GOsa caching)        - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``
gosaUserTemplate       (GOsa -
↳ Class for GOsa User Templates) - 1.3.6.1.4.1.10098.1.2.1.
↳19.11``
gosaAccount            (GOsa -
↳ Class for GOsa Accounts)      - 1.3.6.1.4.1.10098.1.2.1.
↳19.6``
gosaObject             (GOsa -
↳ Class for GOsa settings)      - 1.3.6.1.4.1.10098.1.2.1.
↳19.1``

```

The **check-deprecated** option will output a list of dn using old attributes and objectClasses if they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Correcting acl editownpwd

Warning: To fix the error in the installed editownpwd, you need to go :

- Acl roles
- Open the editownpwd acl
- Save it

Its very important you do it, to know why look at [the users must update his role editownpasswd](#)

Checking your indexed attributes

Check that all you index still match with valid attributes present in your ldap directory

Enjoy :)

Migrate FusionDirectory from 1.0.18 to 1.0.19

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

No upgrade

Upgrade of LDAP directory

No Upgrade

Correcting acl editownpwd

Warning: To fix the error in the installed editownpwd, you need to go :

- Acl roles
- Open the editownpwd acl
- Save it

Its very important you do it, to know why look at [the users must update his role editownpasswd](#)

Enjoy :)

Migrate FusionDirectory from 1.0.19 to 1.0.20

Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/template-fd.schema
```

Upgrade of LDAP directory

if your are using the argonaut plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema
```

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses_
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept,
↳ value kernel modules.)   - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook             (FusionDirectory -
↳ Password hook (external command)) - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI              (FusionDirectory -
↳ Snaphost URI)           - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                 (Goto - Gonicus Terminal Concept, value xVsync.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter             (Hardware definitions,
↳ value soundAdapter)      - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.
↳)                         - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept,
↳ value scannerClients.)   - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum       (Goto -
↳ quick way to see if something has changed) - 1.3.6.1.4.1.10098.1.1.2.
↳12``
```

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gotoRootPasswd	(Goto - Gonicus Terminal Concept, value rootPasswd. ↪) - 1.3.6.1.4.1.10098.1.1.1.14``	
gotoXKbLayout	(Goto - Gonicus Terminal Concept, value xKblayout. ↪) - 1.3.6.1.4.1.10098.1.1.1.26``	
gotoProfileServer	(Goto - ↪ specifies the profile server) - 1.3.6.1.4.1.10098.1.1.11. ↪8``	
fdAccountRDN	(FusionDirectory - ↪ use a placeholder pattern for generating account RDNs) - 1.3.6.1.4.1.38414.8. ↪12.2``	
gotoScannerEnable	(Goto - Gonicus Terminal Concept, value scannerEnable. ↪) - 1.3.6.1.4.1.10098.1.1.1.10``	
ghGfxAdapter	(Hardware definitions, ↪ value Grafikkarte) - 1.3.6.1.4.1.10098.1.1.2.9``	
gotoFontPath	(Goto - Gonicus Terminal Concept, value fontPath. ↪) - 1.3.6.1.4.1.10098.1.1.1.5``	
ghIdeDev	(Hardware definitions, ↪ value ideDev) - 1.3.6.1.4.1.10098.1.1.2.4``	
gotoLpdEnable	(Goto - Gonicus Terminal Concept, value lpdEnable. ↪) - 1.3.6.1.4.1.10098.1.1.1.9``	
gotoXKbVariant	(Goto - Gonicus Terminal Concept, value xKbvariant. ↪) - 1.3.6.1.4.1.10098.1.1.1.27``	
fdRfc2307bis	(FusionDirectory - ↪ rfc2307bis) - 1.3.6.1.4.1.38414.8.10.1``	
gotoAutoFs	(Goto - Gonicus Terminal Concept, value autofS. ↪) - 1.3.6.1.4.1.10098.1.1.1.31``	
gotoSndModule	(Goto - Gonicus Terminal Concept, value sound Modules. ↪) - 1.3.6.1.4.1.10098.1.1.1.29``	
gotoCdromEnable	(Goto - Gonicus Terminal Concept, value cdromEnable. ↪) - 1.3.6.1.4.1.10098.1.1.1.8``	
gotoScannerModel	(Goto - Gonicus Terminal Concept, value scannerModel. ↪) - 1.3.6.1.4.1.10098.1.1.1.40``	
gosaLoginRestriction	(Gosa - ↪ Multivalue attribute to carry a number of allowed ips/subnets) - 1.3.6.1.4.1. ↪10098.1.1.12.46``	
gotoXColordepth	(Goto - Gonicus Terminal Concept, value xColordepth. ↪) - 1.3.6.1.4.1.10098.1.1.1.21``	
↪academicTitle	(Field to represent the academic title)	-
↪1.3.6.1.4.1.10098.1.1.6.2``		
fdSnapshotAdminDn	(FusionDirectory - ↪ Snapshost admin dn) - 1.3.6.1.4.1.38414.8.17.4``	
gotoFilesystem	(Goto - Gonicus Terminal Concept, value filesystem. ↪) - 1.3.6.1.4.1.10098.1.1.1.6``	
↪ghInventoryNumber	(Unique number for inclusion in an inventory)	-
↪1.3.6.1.4.1.10098.1.1.2.10``		
gosaSubtreeACL	(Gosa - ↪ ACL entry) - 1.3.6.1.4.1.10098.1.1.12. ↪1``	
fdIdGenerator	(FusionDirectory - ↪ An automatic way to generate new user ids) - 1.3.6.1.4.1.38414.8.12.4``	
ghUsbSupport	(Hardware definitions, ↪ value usbSupport) - 1.3.6.1.4.1.10098.1.1.2.3``	
gotoSysStatus	(Keeps current system status - ↪ info shown in Gosa) - 1.3.6.1.4.1.10098.1.1.2.11``	
fdCopyPaste	(FusionDirectory - (de)Activate copy/ ↪paste) - 1.3.6.1.4.1.38414.8.14.5``	

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```

gotoXDriver          (Goto - Gonicus Terminal Concept, value xDriver.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel         (Goto - Gonicus Terminal Concept, value xKbmodel.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN (FusionDirectory -
↳ Personal title in dn) - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer        (Goto - Gonicus Terminal Concept, value lpdServer.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync           (Goto - Gonicus Terminal Concept, value xHsync.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags     (Goto - Flags for Profile handling -
↳ C is for caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType            (Hardware definitions,
↳ value cpuType)    - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution      (Goto - Gonicus Terminal Concept, value xResolution.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare            (Goto -
↳ specifies a share) - 1.3.6.1.4.1.10098.1.1.11.
↳9``
gotoScannerBackend  (Goto - Gonicus Terminal Concept,
↳ value scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory -
↳ Snapshot admin password) - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts (FusionDirectory -
↳ available voicemail contexts) - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage (GOsa -
↳ Defines the default language for a user) - 1.3.6.1.4.1.10098.1.1.12.
↳14``
ghMemSize           (Hardware definitions,
↳ value memSize)    - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota    (Goto -
↳ save quota for home) - 1.3.6.1.4.1.10098.1.1.11.
↳15``
fdSipContexts       (FusionDirectory -
↳ available sip contexts) - 1.3.6.1.4.1.38414.19.11.1``
fdPhoneConferenceRDN (FusionDirectory -
↳ Phone conference RDN) - 1.3.6.1.4.1.38414.19.10.3``
ghScsiDev           (Hardware definitions,
↳ value scsiDev)    - 1.3.6.1.4.1.10098.1.1.2.5``
fdPhoneMacroRDN     (FusionDirectory -
↳ Phone macro RDN) - 1.3.6.1.4.1.38414.19.10.2``
ghNetNic            (Hardware definitions,
↳ value Network Device) - 1.3.6.1.4.1.10098.1.1.2.8``
gotoFloppyEnable    (Goto - Gonicus Terminal Concept, value floppyEnable.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.7``
gotoXMouseButton    (Goto - Gonicus Terminal Concept, value xMouseButton.
↳)                  - 1.3.6.1.4.1.10098.1.1.1.23``
gotoXMouseEvent     (Hardware definitions,
↳ value Type of mouse) - 1.3.6.1.4.1.10098.1.1.1.34``

```

Deprecated objectClasses:

```

goCupsServer         (CUPS server description)
↳ 1.3.6.1.4.1.10098.1.2.1.23``
gosaCacheEntry       (GOsa -
↳ Class for GOsa caching) - 1.3.6.1.4.1.10098.1.2.1.
↳19.3``

```

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Ubuntu 12.0.4 TLS users

Warning: Since 1.0.9.2 FusionDirectory need the php-cas library for CAS server support. This library can normally found in universe in the Ubuntu repositories.

In case you did not find it, grab the deb from here and install it

<https://packages.ubuntu.com/trusty/all/php-cas/download>

and select your preferred mirror

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly

Debian Repository.

RPM Repository.

Removed plugins

If you used kolab2 plugin you need to remove the plugin and its schema with the following command

```
apt-get remove fusiondirectory-plugin-kolab2
apt-get remove fusiondirectory-plugin-kolab2-schema
```

Splitted plugins

The posix tab of fusiondirectory is now a plugin by itself, if you use posix attributes install the corresponding plugin

```
apt-get install fusiondirectory-plugin-posix
```

Upgrade schema2ldif

For Jessie distribution add extra repository

```
#fusiondirectory debian-extra repository
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie jessie main
```

Update the package list and upgrade schema2ldif

```
apt-get update
apt-get install schema2ldif
```

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade the core schemas

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd-conf.schema  
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
```

Upgrade of LDAP directory

if you are using the argonaut plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/argonaut-fd.schema
```

if you are using the dhcp plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/dhcp-fd.schema
```

if you are using the fai plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/fai.schema
```

if you are using the mail plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/mail-fd.schema
```

if you are using the systems plugin you have to update its schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/service-fd.schema  
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd-conf.  
↪schema  
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/systems-fd.schema
```

Migrate old objects

If you have systems use this command to migrate them

```
fusiondirectory-setup --migrate-systems
```

If you have phones use this command to migrate them

```
fusiondirectory-setup --migrate-phones
```

If you have winstations use this command to migrate them

```
fusiondirectory-setup --migrate-winstations
```

Check for deprecated attributes and objectClasses in your LDAP

The **list-deprecated** option of **fusiondirectory-setup** show deprecated attributes and objectClasses for FusionDirectory

```
fusiondirectory-setup --list-deprecated List deprecated attributes and objectclasses
↳Deprecated attributes:

gotoModules                (Goto - Gonicus Terminal Concept, value kernel_
↳modules.)                - 1.3.6.1.4.1.10098.1.1.1.32``
fdPasswordHook            (FusionDirectory - Password hook (external command))
↳                          - 1.3.6.1.4.1.38414.8.13.4``
fdSnapshotURI             (FusionDirectory - Snaphost URI)
↳                          - 1.3.6.1.4.1.38414.8.17.3``
gotoXVsync                (Goto - Gonicus Terminal Concept, value xVsync.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.19``
ghSoundAdapter            (Hardware definitions, value soundAdapter)
↳                          - 1.3.6.1.4.1.10098.1.1.2.7``
gotoXMouseport            (Goto - Gonicus Terminal Concept, value xMouseport.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.22``
gotoXMonitor              (Goto - Gonicus Terminal Concept, value xMonitor.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.17``
gotoAdaptPath             (Goto - Gonicus Terminal Concept, value adaptpath.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.33``
gotoScannerClients        (Goto - Gonicus Terminal Concept, value_
↳scannerClients.)        - 1.3.6.1.4.1.10098.1.1.1.11``
gotoHardwareChecksum      (Goto - quick way to see if something has changed)
↳                          - 1.3.6.1.4.1.10098.1.1.2.12``
gotoRootPasswd           (Goto - Gonicus Terminal Concept, value rootPasswd.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.14``
gotoXKbLayout            (Goto - Gonicus Terminal Concept, value xKblayout.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.26``
gotoProfileServer         (Goto - specifies the profile server)
↳                          - 1.3.6.1.4.1.10098.1.1.11.8``
fdAccountRDN              (FusionDirectory - use a placeholder pattern for_
↳generating account RDNs) - 1.3.6.1.4.1.38414.8.12.2``
gotoScannerEnable         (Goto - Gonicus Terminal Concept, value scannerEnable.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.10``
ghGfxAdapter              (Hardware definitions, value Grafikkarte)
↳                          - 1.3.6.1.4.1.10098.1.1.2.9``
gotoFontPath             (Goto - Gonicus Terminal Concept, value fontPath.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.5``
ghIdeDev                  (Hardware definitions, value ideDev)
↳                          - 1.3.6.1.4.1.10098.1.1.2.4``
gotoLpdEnable             (Goto - Gonicus Terminal Concept, value lpdEnable.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.9``
gotoXKbVariant           (Goto - Gonicus Terminal Concept, value xKbvariant.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.27``
fdRfc2307bis             (FusionDirectory - rfc2307bis)
↳                          - 1.3.6.1.4.1.38414.8.10.1``
gotoAutoFs               (Goto - Gonicus Terminal Concept, value autofS.)
↳                          - 1.3.6.1.4.1.10098.1.1.1.31``
gotoSndModule            (Goto - Gonicus Terminal Concept, value sound Modules.
↳)                        - 1.3.6.1.4.1.10098.1.1.1.29``
```

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```

gotoCdromEnable          (Goto - Gonicus Terminal Concept, value cdromEnable.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.8``
gotoScannerModel        (Goto - Gonicus Terminal Concept, value scannerModel.
↳) - 1.3.6.1.4.1.10098.1.1.1.40``
gosaLoginRestriction    (Gosa - Multivalue attribute to carry a number of ↵
↳allowed ips/subnets) - 1.3.6.1.4.1.10098.1.1.12.46``
gotoXColordepth         (Goto - Gonicus Terminal Concept, value xColordepth.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.21``
academicTitle           (Field to represent the academic title) ↵
↳ - 1.3.6.1.4.1.10098.1.1.6.2``
fdSnapshotAdminDn       (FusionDirectory - Snaphost admin dn) ↵
↳ - 1.3.6.1.4.1.38414.8.17.4``
gotoFilesystem          (Goto - Gonicus Terminal Concept, value filesystem.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.6``
ghInventoryNumber       (Unique number for inclusion in an inventory) ↵
↳ - 1.3.6.1.4.1.10098.1.1.2.10``
gosaSubtreeACL          (Gosa - ACL entry) ↵
↳ - 1.3.6.1.4.1.10098.1.1.12.1``
fdIdGenerator           (FusionDirectory - An automatic way to generate new ↵
↳user ids) - 1.3.6.1.4.1.38414.8.12.4``
ghUsbSupport            (Hardware definitions, value usbSupport) ↵
↳ - 1.3.6.1.4.1.10098.1.1.2.3``
gotoSysStatus           (Keeps current system status - info shown in Gosa) ↵
↳ - 1.3.6.1.4.1.10098.1.1.2.11``
fdCopyPaste            (FusionDirectory - (de)Activate copy/paste) ↵
↳ - 1.3.6.1.4.1.38414.8.14.5``
gotoXDriver             (Goto - Gonicus Terminal Concept, value xDriver.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.28``
gotoXKbModel           (Goto - Gonicus Terminal Concept, value xKbmodel.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.25``
fdPersonalTitleInDN     (FusionDirectory - Personal title in dn) ↵
↳ - 1.3.6.1.4.1.38414.8.12.5``
gotoLpdServer           (Goto - Gonicus Terminal Concept, value lpdServer.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.4``
gotoXHsync             (Goto - Gonicus Terminal Concept, value xHsync.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.18``
gotoProfileFlags        (Goto - Flags for Profile handling - C is for ↵
↳caching) - 1.3.6.1.4.1.10098.1.1.11.7``
ghCpuType              (Hardware definitions, value cpuType) ↵
↳ - 1.3.6.1.4.1.10098.1.1.2.1``
gotoXResolution         (Goto - Gonicus Terminal Concept, value xResolution.) ↵
↳ - 1.3.6.1.4.1.10098.1.1.1.20``
gotoShare              (Goto - specifies a share) ↵
↳ - 1.3.6.1.4.1.10098.1.1.11.9``
gotoScannerBackend      (Goto - Gonicus Terminal Concept, value ↵
↳scannerBackend.) - 1.3.6.1.4.1.10098.1.1.1.39``
fdSnapshotAdminPassword (FusionDirectory - Snaphost admin password) ↵
↳ - 1.3.6.1.4.1.38414.8.17.5``
fdVoicemailContexts     (FusionDirectory - available voicemail contexts) ↵
↳ - 1.3.6.1.4.1.38414.19.11.2``
gosaDefaultLanguage     (Gosa - Defines the default language for a user) ↵
↳ - 1.3.6.1.4.1.10098.1.1.12.14``
ghMemSize              (Hardware definitions, value memSize) ↵
↳ - 1.3.6.1.4.1.10098.1.1.2.2``
gotoProfileQuota        (Goto - save quota for home) ↵
↳ - 1.3.6.1.4.1.10098.1.1.11.15``
fdSipContexts          (FusionDirectory - available sip contexts) ↵
↳ - 1.3.6.1.4.1.38414.19.11.1``

```

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fdPhoneConferenceRDN	(FusionDirectory - Phone conference RDN)	↳
↳	- 1.3.6.1.4.1.38414.19.10.3``	
ghScsiDev	(Hardware definitions, value scsiDev)	↳
↳	- 1.3.6.1.4.1.10098.1.1.2.5``	
fdPhoneMacroRDN	(FusionDirectory - Phone macro RDN)	↳
↳	- 1.3.6.1.4.1.38414.19.10.2``	
ghNetNic	(Hardware definitions, value Network Device)	↳
↳	- 1.3.6.1.4.1.10098.1.1.2.8``	
gotoFloppyEnable	(Goto - Gonicus Terminal Concept, value floppyEnable.	
↳)	- 1.3.6.1.4.1.10098.1.1.1.7``	
gotoXMouseButton	(Goto - Gonicus Terminal Concept, value xMouseButton.	
↳)	- 1.3.6.1.4.1.10098.1.1.1.23``	
gotoXMouseType	(Hardware definitions, value Type of mouse)	↳
↳	- 1.3.6.1.4.1.10098.1.1.1.34``	

Deprecated objectClasses:

goCupsServer	(CUPS server description)	↳
↳	- 1.3.6.1.4.1.10098.1.2.1.23``	
gosaCacheEntry	(GOsa - Class for GOsa caching)	↳
↳	- 1.3.6.1.4.1.10098.1.2.1.19.3``	
gosaUserTemplate	(GOsa - Class for GOsa User Templates)	↳
↳	- 1.3.6.1.4.1.10098.1.2.1.19.11``	
gosaAccount	(GOsa - Class for GOsa Accounts)	↳
↳	- 1.3.6.1.4.1.10098.1.2.1.19.6``	
gosaObject	(GOsa - Class for GOsa settings)	↳
↳	- 1.3.6.1.4.1.10098.1.2.1.19.1``	

The **check-deprecated** option will output a list of dn using old attributes and objectClasses of they are present in your ldap server

```
fusiondirectory-setup --check-deprecated
List LDAP entries using deprecated attributes or objectclasses
There are no entries in the LDAP using obsolete attributes
There are no entries in the LDAP using obsolete classes
```

The **ldif-deprecated** option will output an ldif file on the console that you can use with ldapmodify to clean you ldap server from old attributes.

```
fusiondirectory-setup --ldif-deprecated > remove_deprecated.ldif
```

If they are old objectClasses it will warn you and you will have to remove it by hand, they have been specified at the **fusiondirectory-setup --check-deprecated** step.

Warning: Please read it carefully before applying !!

Checking your indexed attributes

Check that all you index still match with valid attributes present in your ldap directory

New format for repository service

If you have a repository service. Open and save it back so it will use the new format

Enjoy :)

Migrate FusionDirectory from 1.1 to 1.1.1

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly
Debian Repository.
RPM Repository.

Upgrade schema2ldif

For Jessie distribution add extra repository

```
#fusiondirectory debian-extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie jessie main
```

Update the package list and upgrade schema2ldif

```
apt-get update  
apt-get install schema2ldif
```

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Enjoy :)

Migrate FusionDirectory from 1.1.1 to 1.2

New Depot Configuration

Warning: The repositories have been cleaned and reorganized please update your configuration accordingly
Debian Repository.
RPM Repository.

Warning: The gpg keys for FusionDirectory and Argonaut have been renewed so you need to install the new keys for the packages to install correctly

Getting the official GPG keys to active package signature.

Upgrade schema2ldif

For Jessie distribution add extra repository

```
#fusiondirectory debian-extra repository
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie jessie main
```

Update the package list and upgrade schema2ldif

```
apt-get update
apt-get install schema2ldif
```

Upgrade FusionDirectory first

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

Upgrade FusionDirectory core package before other ones to avoid dependencies errors:

```
apt-get install fusiondirectory
```

Upgrade FusionDirectory schema package too.

```
apt-get install fusiondirectory-schema
```

Upgrade of LDAP directory

Upgrade core schema of FusionDirectory

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/core-fd.schema
```

if you are using the reanater plugin you have to add its new schema

```
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/reanater-partage-fd.
↪schema
```

if you are using the sympa plugin you have to update its schema

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/sympa-fd-conf.schema
fusiondirectory-insert-schema -m /etc/ldap/schema/fusiondirectory/sympa-fd.schema
```

In case you use system template that have a DNS tab, you need to remake it because the separator “|” is changed to “^”

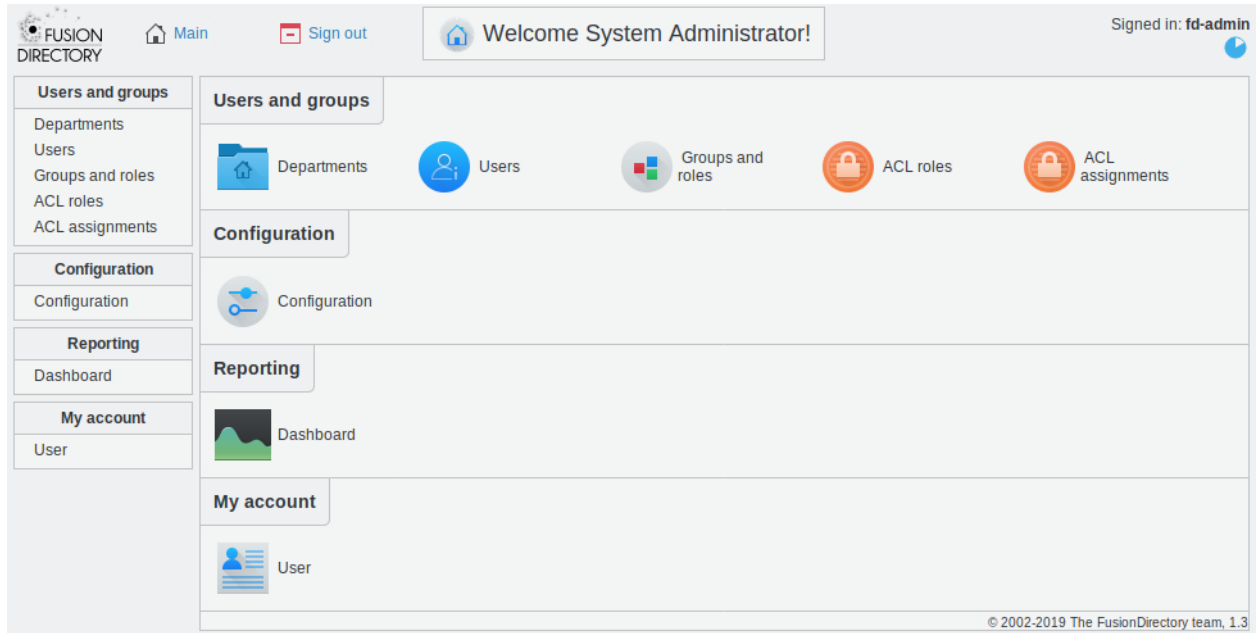
Enjoy :)

1.6 Core

FusionDirectory Core

1.6.1 Main menu

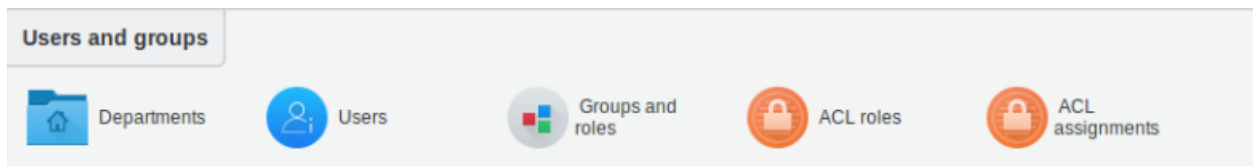
Once logged in into FusionDirectory, you get to the main menu. Here is what it looks like with core view:



Users and groups

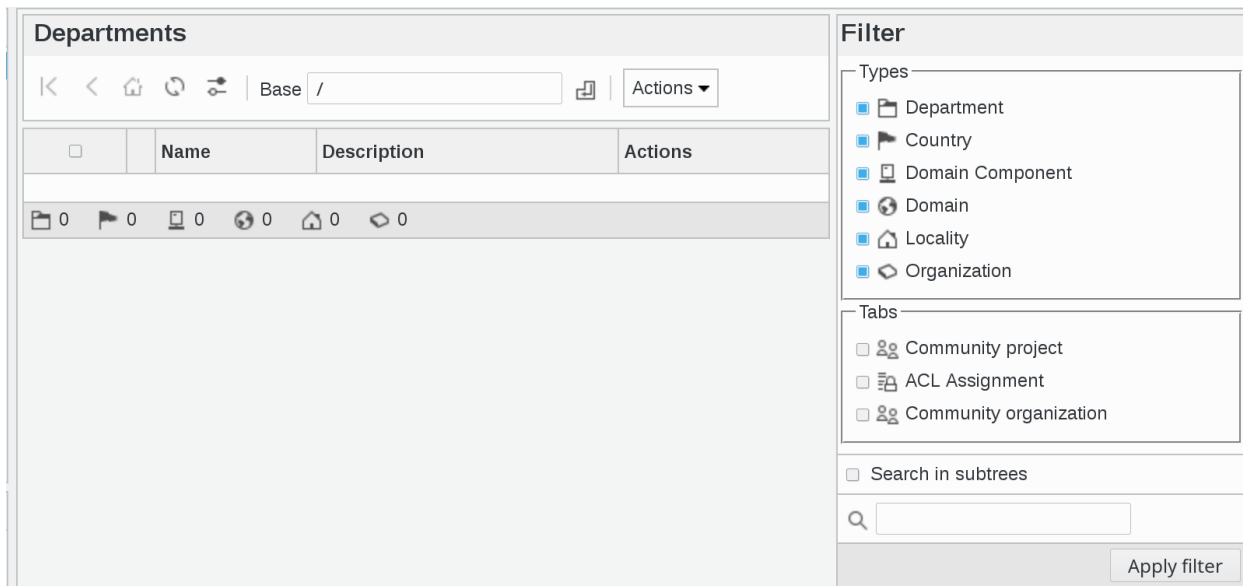
This section contains most plugins allowing to manage objects in your LDAP, by default mainly users and groups as the name suggest, but as you install plugin you may end up handling other types of objects.

In our example, this user can access the following Users and groups sections:



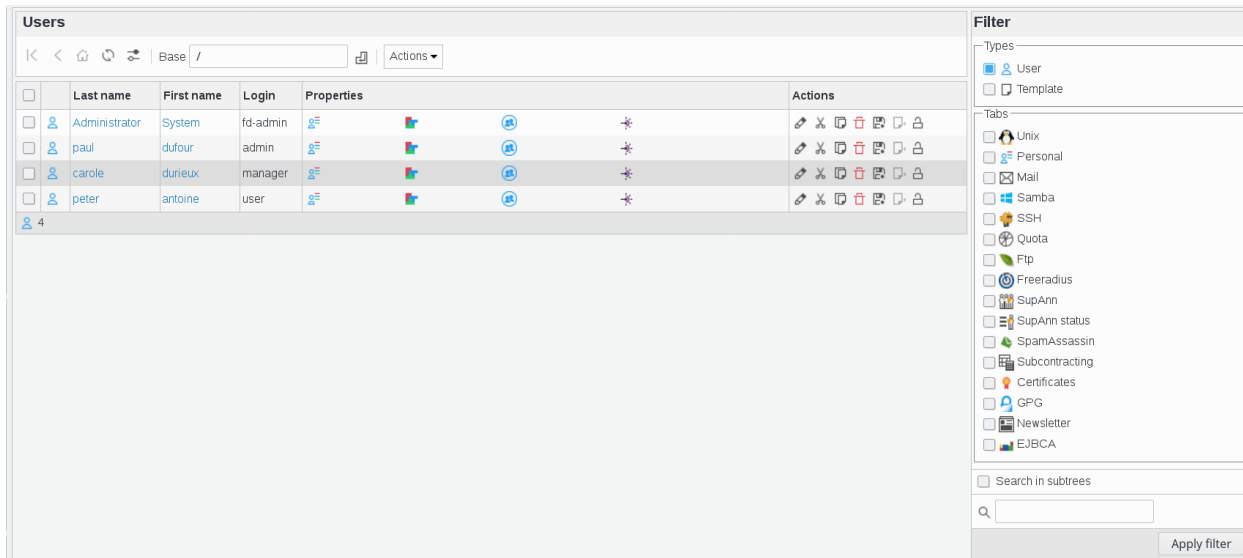
- **Departments** : manage Departments, countries, domain components, domains, localities and organization nodes

Here is an overview of Departments section details



- **Users** : manage user accounts and their properties

Here is an overview of Users section details



- **Groups and roles** : allows you to manage objects groups, POSIX groups and roles

Here is an overview of Groups and roles section details

The screenshot shows the 'Groups and roles' management interface. It features a table with columns for Name, Description, Members, Properties, and Actions. The table lists three groups: 'ogroup-test', 'posixgroup-test', and 'role-test'. To the right, a 'Filter' sidebar allows users to filter by Types (Group, POSIX group, Role, Template) and Members (User, Group, Application, Server, Workstation, Terminal, Phone, Printer, Simple security object). There is also a search box and an 'Apply filter' button.

	Name	Description	Members	Properties	Actions
<input type="checkbox"/>	ogroup-test				
<input type="checkbox"/>	posixgroup-test				
<input type="checkbox"/>	role-test				

- **ACL roles** : manage ACL roles

Here is an overview of ACL roles section details

The screenshot shows the 'ACL roles' management interface. It features a table with columns for Name, Description, and Actions. The table lists three roles: 'admin', 'manager', and 'editowninfos'. To the right, a 'Filter' sidebar allows users to filter by Types (ACL role) and includes a search box and an 'Apply filter' button.

	Name	Description	Actions
<input type="checkbox"/>	admin	Donner tous les droits sur tous les objets	
<input type="checkbox"/>	manager	Donner tous les droits sur les utilisateurs de cette branche	
<input type="checkbox"/>	editowninfos	Permet aux utilisateurs d'éditer leur propres informations (onglet principal et posix, à n'utiliser que sur la base)	

- **ACL assignments** : manage ACL roles assignments to users

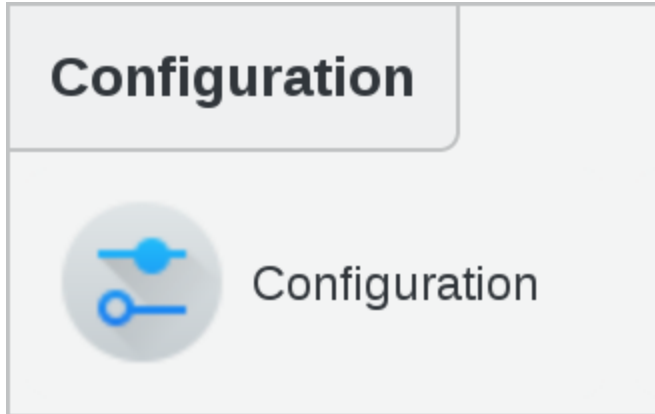
Here is an overview of ACL assignments section details

The screenshot shows the 'ACL assignments' management interface. It features a table with columns for DN and Actions. The table lists one assignment with the DN 'dc=demo-fusiondirectory,dc=org'. There is an 'Actions' dropdown menu at the top and an 'Apply filter' button at the bottom.

	DN	Actions
<input type="checkbox"/>	dc=demo-fusiondirectory,dc=org	

Configuration

This section contains the configuration page of your FusionDirectory installation, and it may contain configuration screen for other plugins as you install them.



Here is an overview of configuration section details

[Sign out](#)
Signed in

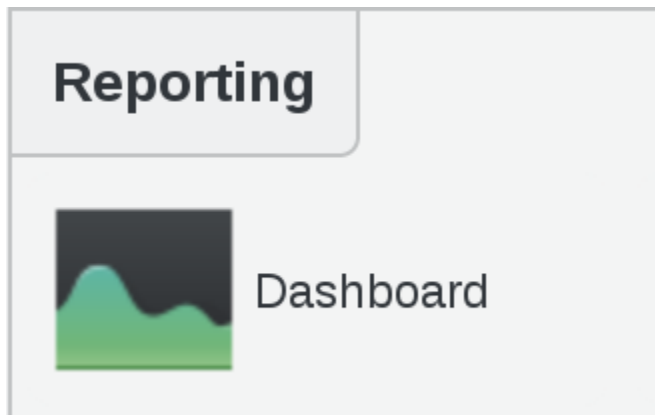
FusionDirectory configuration

cn=config,ou=fusiondirectory,dc=demo-fusiondirectory,dc=org [Click the 'Edit' button below to change information in t](#)

Configuration	Samba	Mail	Plugins	Systems	User reminder	Password recovery	FAI configuration
Look and feel Language: English (English) <input type="text"/> Theme*: breezy <input type="text"/> Timezone*: Europe/Brussels <input type="text"/>				Core settings LDAP size limit: 200 <input type="text"/> Edit locking: entryCSN <input type="text"/> Enable logging: <input type="checkbox"/> Schema validation: <input type="checkbox"/> Enable snapshots: <input type="checkbox"/> Snapshot base: ou=snapshots,dc=demo-fus <input type="text"/> Wildcard foreign keys: <input type="checkbox"/>			
Password settings Password default hash*: ssh <input type="text"/> Force default hash: <input type="checkbox"/> Password minimum length: <input type="text"/> Password minimum differs: <input type="text"/> Use account expiration: <input type="checkbox"/> SASL Realm: <input type="text"/> SASL Exop: <input type="text"/>				Login and session Login attribute*: uid <input type="text"/> Enforce encrypted connections: <input type="checkbox"/> Warn if session is not encrypted: <input type="checkbox"/> Session lifetime*: 1800 <input type="text"/> HTTP Basic authentication: <input type="checkbox"/> HTTP Header authentication: <input type="checkbox"/> Header name: AUTH_USER <input type="text"/>			
SSL Key path: /etc/ssl/private/fd.key <input type="text"/>							

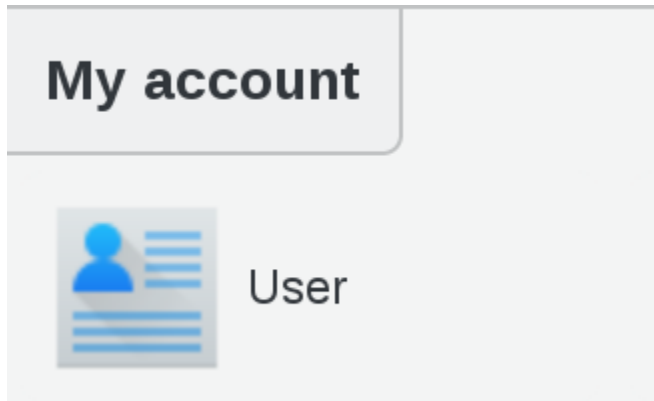
Reporting

This section contains the dashboard and any reporting plugin you may install.

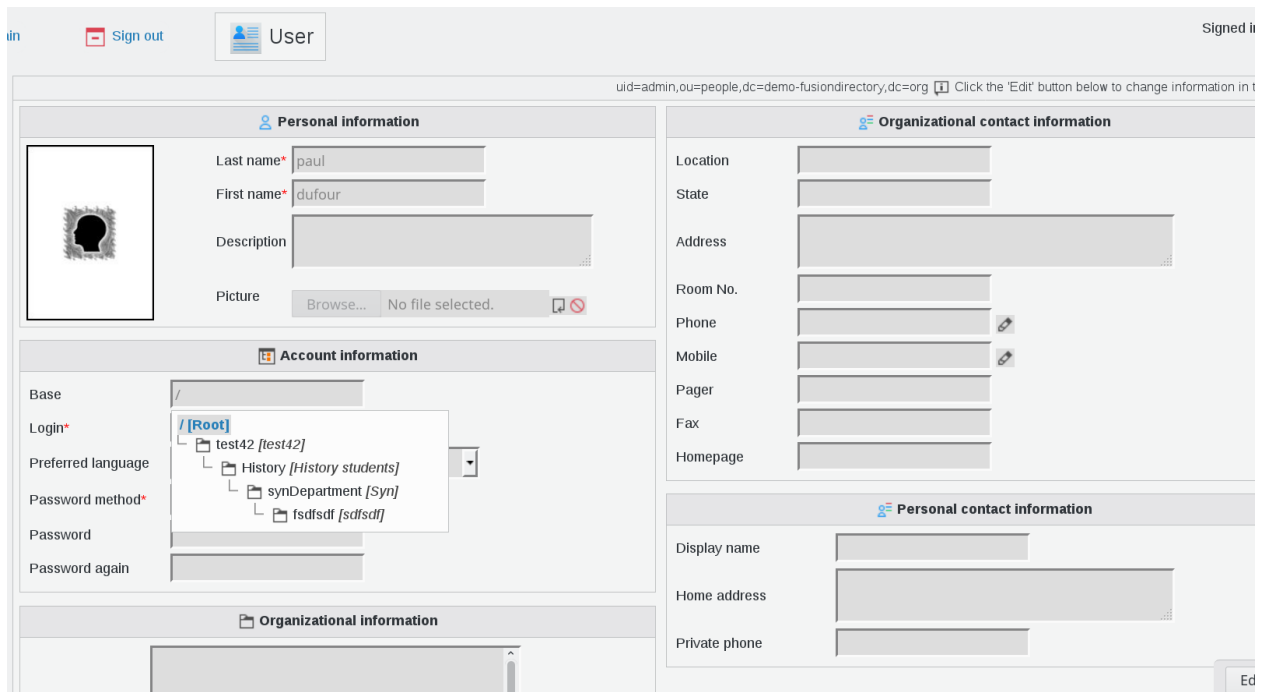


My account

This special category shows you the user tabs for the user account you signed in as. It's in this section that your users will be able to edit their own informations if you give them ACL rights to do so.



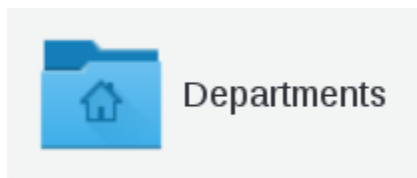
Here is an overview of user section details



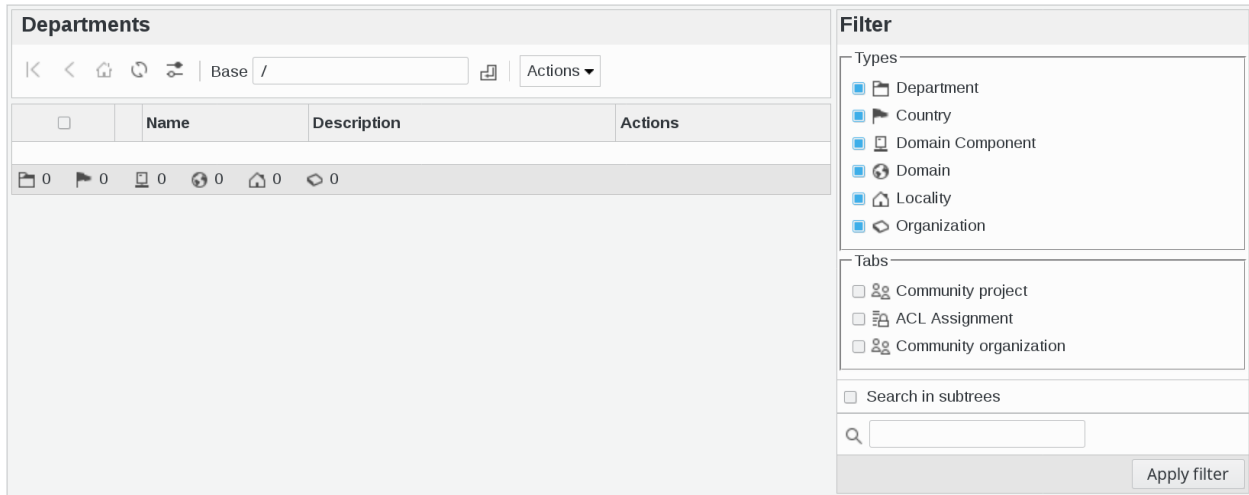
1.6.2 Departments

This page allows you to manage your LDAP tree structure, so that you may sort the other objects in branches later.

Click on Departments icon on FusionDirectory main page



You will be directed to Departments management page

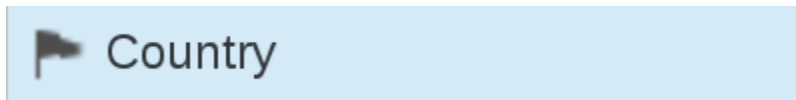


The following actions are available:

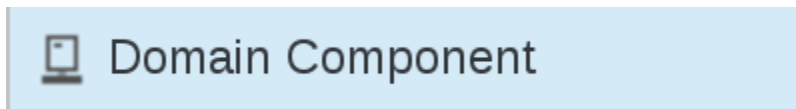
- **Create Department:** Think of this as the LDAP equivalent of a folder, it's the basic container for organizing objects in your LDAP.



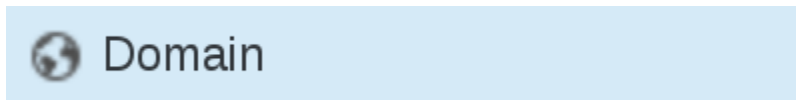
- **Create Country:** You may use this if your activity is spread over several countries and you want to reflect that in your tree.



- **Domain Component:** You may use that to reflect your DNS in your tree



- **Domain:** Same as above but if you want to put the whole domain as only one node (ie *d=example.com* instead of *dc=example,dc=com*)



- **Locality:** You may use this if your activity is spread over several locations and you want to reflect that in your tree.



- **Organization:** May represent a company or any other kind of organization.


Organization

- **Export list:**

- PDF: Export the current object list as a PDF document
- CSV: Export the current object list as a CSV file



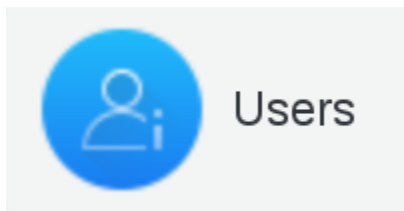
Remove: Delete an existing department

 Remove

1.6.3 Users

This page is for user management.

You can access Users management in two ways : either by clicking Users icon on FusionDirectory main page



or by clicking Users entry in Users and Groups Menu on the left

Users and groups

Departments

Users

Groups and roles

NIS Netgroups

Aliases

Sympa

ACL roles

ACL assignments

SupAnn structures

Sudo

EJBCA

DSA

Applications

You will be directed on users management page

Users						
⏪ ⏩ 🏠 🔄 Base / <input type="text"/> 📄 Actions ▾						
<input type="checkbox"/>		Surname ▾	Given name	Login	Properties	Actions
		test42 [test42]				
<input type="checkbox"/>		Administrator	System	fd-admin		
<input type="checkbox"/>		carole	durieux	manager		
<input type="checkbox"/>		paul	dufour	admin		
<input type="checkbox"/>		peter	antoine	user		

Note: All management pages you will see in FusionDirectory look like this. This one allows to manage users.

Click on one user entry in order to access this user’s information overview

uid=user,ou=people,dc=demo-fusiondirectory,dc=

User Unix Personal Mail Samba **Groups and roles** SSH Nagios Quota Proxy Ftp Freeradius NIS Netgroup SupAnn Subcontracting SpamAssassin Certificates Newsletter GPG EJBCA References LDAP

Personal information

Last name*

First name*

Description

Picture No file selected.

Account information

Base

Login*

Preferred language

Password method*

Password

Password again

Organizational information

Organizational contact information

Location

State

Address

Room No.

Phone

Mobile

Pager

Fax

Homepage

Personal contact information

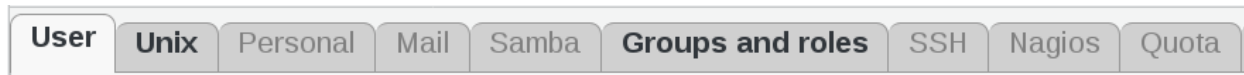
Display name

Home address

Private phone

FusionDirectory is based on tabs. You will find the same tab-system in plugins, configuration etc.

Activated tabs are always in black and non-activated tab are gray.



Navigation

The navigation bar allows you to navigate your tree. The first icon will take you to your LDAP root, the second one will move one branch up, the third one goes to the LDAP base the user you are signed in as is stored. Then there is a refresh button, and then the Base dropdown allows you to quickly jump anywhere in your tree.

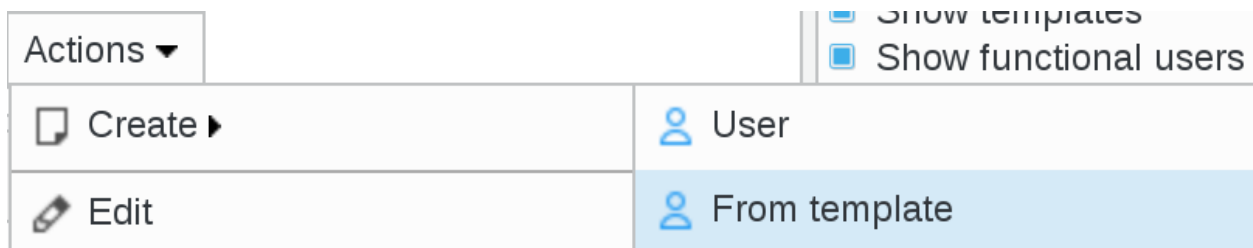
Actions

The following actions are available:

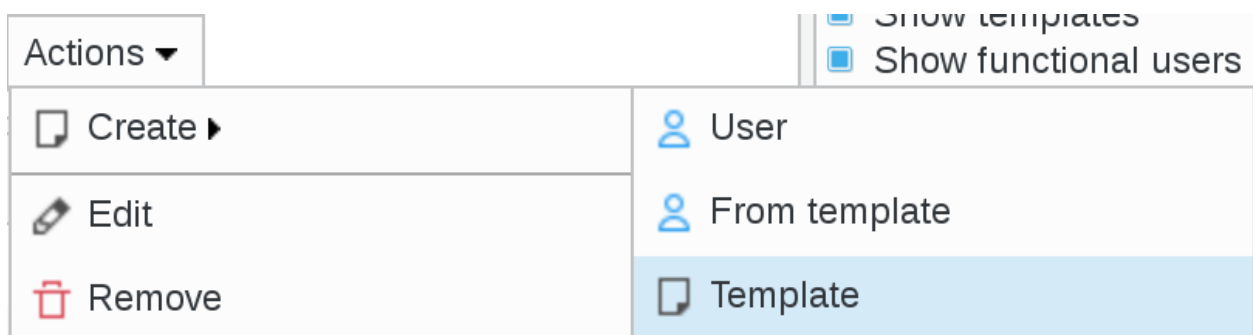
Create User: Create a new user



Create From template: Create a new user from a template



Create Template: Create a user template



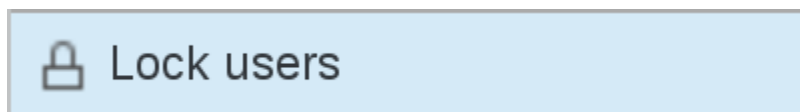
Edit: Edit an existing user




Remove: Delete an existing user




Lock users: Lock existing users



Unlock users: Unlock existing users

 Unlock users

Apply template: Apply a template to an existing user


 Apply template

Export list


- PDF: Export the current object list as a PDF document
- CSV: Export the current object list as a CSV file

 Export list ▶	 CSV
 Copy	 PDF


Copy: Copy users

 Copy


Cut: Cut users to move them

 Cut

Paste: Paste copied or cut users to the current base

 Paste

Restore snapshots: Restore snapshots of users

 Restore snapshots

Filter

On the right, you have a very practical Filter menu. The filter box let you filter what you are listing.



You can select which object types you want to list or hide, if you want to show templates or hide them.

You can also filter objects depending on which tabs are activated on them.

















You can also use the text box to do a text search.

Filter

Types

-  User
-  Template

Tabs

-  Unix
-  Personal
-  Mail
-  Samba
-  SSH
-  Quota
-  Ftp
-  Freeradius
-  SupAnn
-  SupAnn status
-  SpamAssassin
-  Subcontracting
-  Certificates
-  GPG
-  Newsletter
-  EJBCA

- Search in subtrees

Apply filter

Click on the filter you are interested in in order to show all the users that apply to that filter.

For example, if you select “Mail” filter, you will see the list of users having Mail plugin installed

The screenshot shows the 'Users' panel on the left and the 'Filter' panel on the right. The 'Users' panel has a table with columns: Last name, First name, Login, Properties, and Actions. One user is listed: peter antoine user. The 'Filter' panel shows 'Types' with 'User' selected and 'Template' unselected. Under 'Tabs', 'Mail' is selected, while 'Unix', 'Personal', and 'Samba' are unselected.

Checking the “Search in subtrees” checkbox allows to search in the whole subtree under the current base.

A close-up of a checkbox labeled 'Search in subtrees'. The checkbox is checked, indicated by a blue square.

There is an option to search on attribute dependent on the columns displayed in list.

When you put your cursor on the magnifying glass icon under filter menu, a black line will appear, describing the different items displayed for this user

A close-up of a search input field with a magnifying glass icon. A dropdown menu is open, showing search options: 'Searches in user/uid, user/cn, user/description, user/sn, user/givenName'. Below the dropdown, the text 'Apply filter' is partially visible.

List

In the list you see objects matching current filter options under the currently selected base.

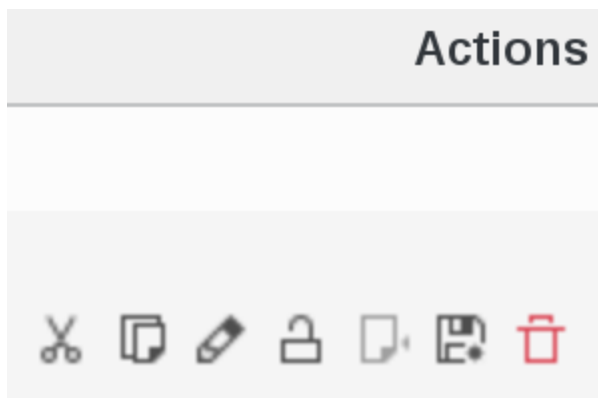
In this example, we selected the following filter : Mail

The screenshot shows the 'Users' panel on the left and the 'Filter' panel on the right. The 'Users' panel has a table with columns: Last name, First name, Login, Properties, and Actions. Two users are listed: paul dufour admin and peter antoine user. The 'Filter' panel shows 'Types' with 'User' selected and 'Template' unselected. Under 'Tabs', 'Mail' is selected, while 'Unix', 'Personal', and 'Samba' are unselected.

You can click on column headers to sort the list

A close-up of the table headers in the 'Users' panel. The headers are: Last name, First name, Login, and Properties. There is a checkbox in the first column.

and you can quickly access actions on an object using the icons in the last column



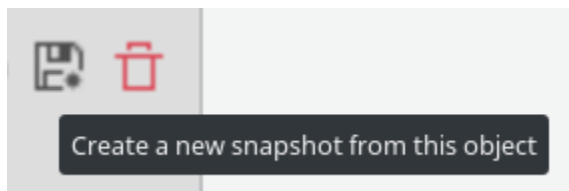
You may also check several objects in the first column and apply an action to all of them using the actions menu.

Under the list is a summary of how many objects of each type are shown (in this example there is 1 Department and 3 Users)



Note: In FusionDirectory you can show **each icon description** by simply putting the cursor on the concerned icon

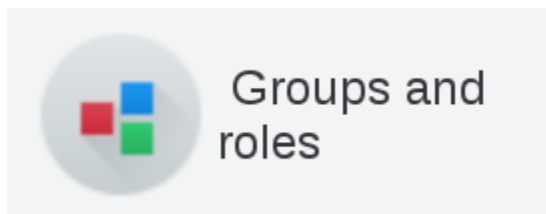
For example, the “floppy disk” icon means “Create a new snapshot from this object”



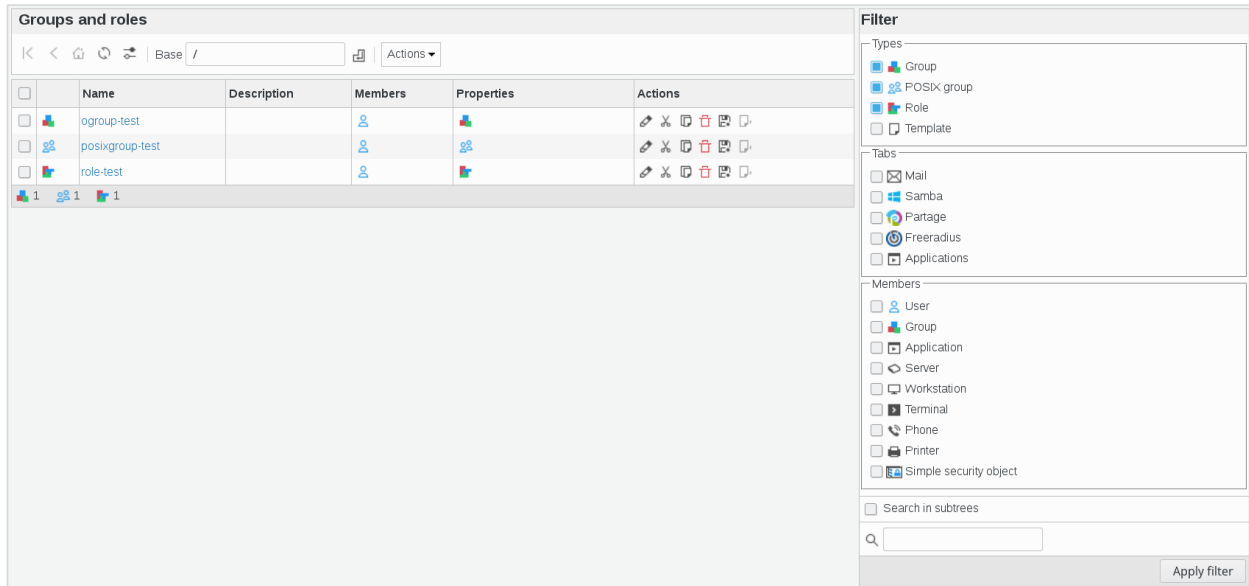
1.6.4 Groups

This page is for groups and roles management.

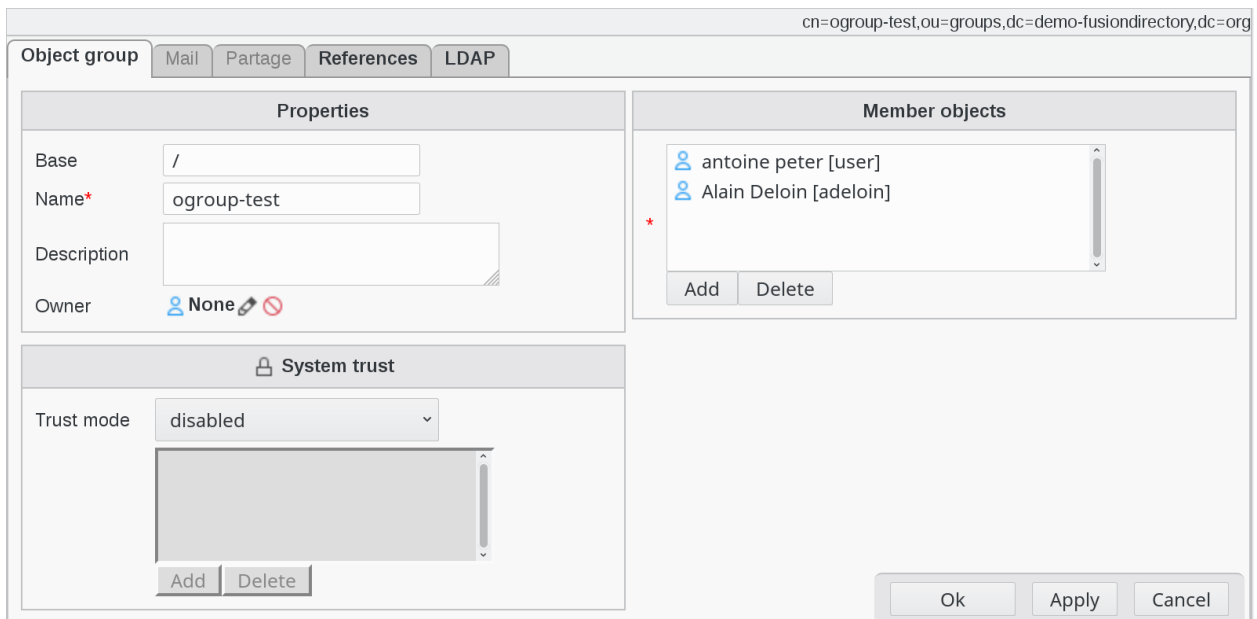
Click on Groups and roles icon on FusionDirectory main page



You will be directed to Groups and roles management page

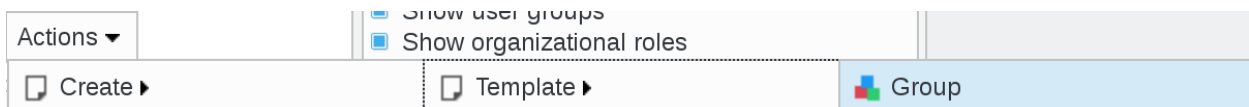


Click on one group entry in order to access this group's information overview



On the previous page, the following actions are available:

Create Template Group: Create a group template



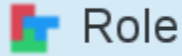
Create Template Role: Create a role template



Create POSIX Group: Create a POSIX group template



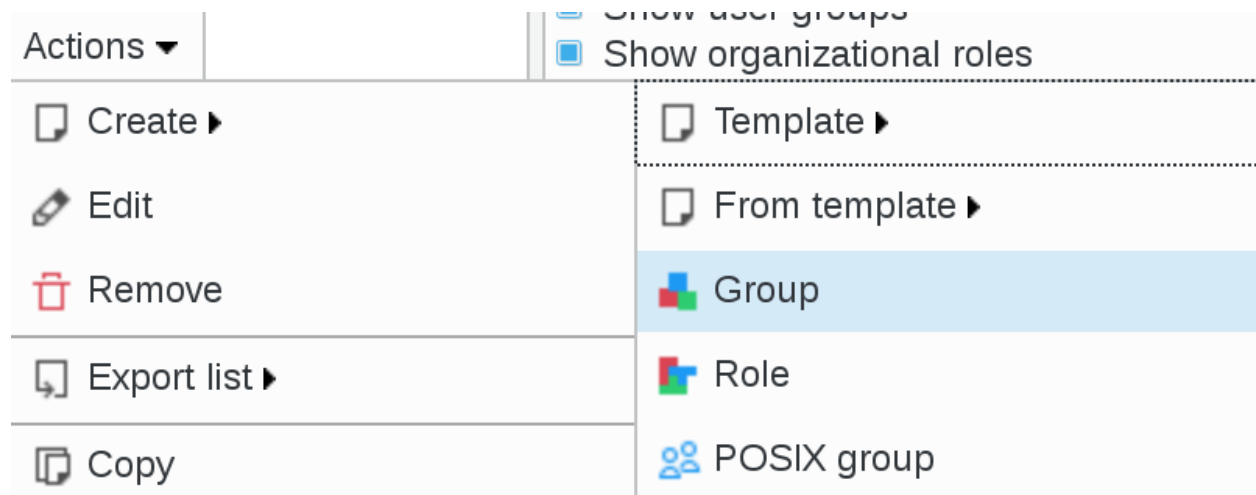
Create From Template Role: Create a role using a template



Create From Template POSIX Group: Create a POSIX group using a template



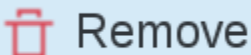
Of course, you can also create groups, roles and POSIX groups from scratch, by clicking on Actions-> Create -> Group, Actions-> Create -> Roles, Actions-> Create -> POSIX Groups



Edit: Edit an existing group



Remove: Delete an existing group

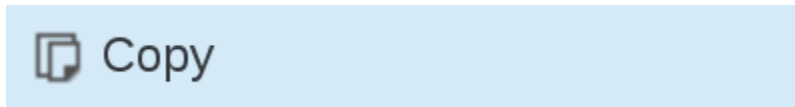


Export list

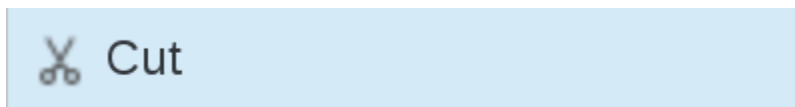
- PDF: Export the current object list as a PDF document
- CSV: Export the current object list as a CSV file

 Export list ▶	 CSV
 Copy	 PDF

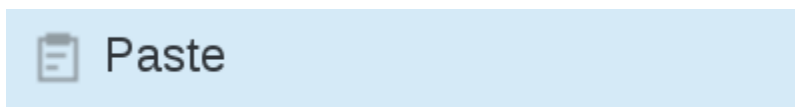
Copy: Copy groups



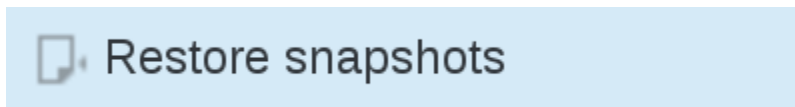
Cut: Cut groups to move them



Paste: Paste copied or cut groups to the current base



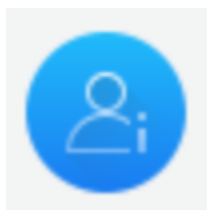
Restore snapshots: Restore snapshots of groups



1.6.5 Configurable lists

Unlike version 1.3, where you had to see the list as it is, in the latest version of FusionDirectory you can decide what you want to see.

Click on Users icon on FusionDirectory main page



You will be directed to Users page

Users

Navigation icons: Back, Home, Refresh, Search, Base / [input], Actions ▾

<input type="checkbox"/>	Last name ▾	First name	Login	Properties		Actions
<input type="checkbox"/>	Administrator	System	fd-admin			
<input type="checkbox"/>	carole	durieux	manager			
<input type="checkbox"/>	paul	dufour	admin			
<input type="checkbox"/>	peter	antoine	user			

4

On top left page you will see a little icon representing two lines with a dot



By clicking on this icon, you can decide which items you want to see in the list

Management configuration

Columns	Type	Attribute	Label	Order	Actions
ObjectTypeColumn				▼	
LinkColumn	sn	Last name		▲▼	
LinkColumn	givenName	First name		▲▼	
Column	uid	Login		▲▼	
PropertiesColumn		Properties		▲▼	
ActionsColumn		Actions		▲	

Type*

Attribute

Label

Persitent

Global default

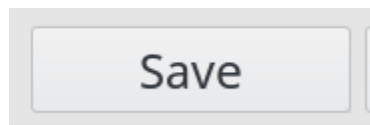
You can play with the little arrows to determine the order of the items in the list.



On configuration page, fill in the following fields :

- **Type** : type of column (required)
- **Attribute** : LDAP attributes to display, separated by commas. The special values “nameAttr” and “mainAttr” also work
- **Label** : title of the column
- **Persistent** : Should this configuration be saved in LDAP as the default configuration for this page
- **Global default** : Should this configuration be saved in LDAP as the default configuration for this page for all users

Click on save button, bottom right



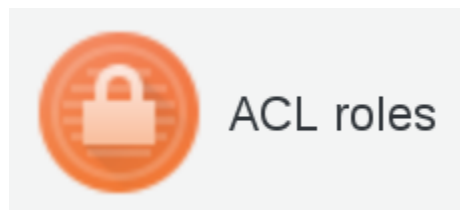
Now, on Users main page you will see columns in the order you choose

<input type="checkbox"/>	Last name ▾	First name	Login	Properties	Actions
--------------------------	-------------	------------	-------	------------	---------

1.6.6 ACL Roles

This page allows to manage ACL Roles

Click on ACL roles icon on FusionDirectory main page



You will be directed to ACL roles management page, where you can see the list of all created ACL roles

<input type="checkbox"/>	Name	Description	Actions
<input type="checkbox"/>	admin	Donner tous les droits sur tous les objets	
<input type="checkbox"/>	manager	Donner tous les droits sur les utilisateurs de cette branche	
<input type="checkbox"/>	editowninfos	Permet aux utilisateurs d'éditer leur propres informations (onglet principal et posix, à n'utiliser que sur la base)	

Note: ACL roles can be used to give rights to users through ACL assignment. Setup offers to create a few default roles for you with common usecases.

If you click on one ACL role, you will see the rights of this role

Role **References** LDAP

Properties

Base: /

Name*: manager

Description: Donner tous les droits sur les utilisateurs de cette branche

ACLs

Contains settings for these objects: user/password, user/user, user/posixAccount

* [Empty row]

Add

The following actions are available:

Create ACL role: Create a new ACL role


Actions ▾

- Create ▶
- ACL role

Edit: Edit an existing ACL role

Edit

Remove: Delete an existing ACL role


 Remove

Export list

- PDF: Export the current object list as a PDF document
- CSV: Export the current object list as a CSV file

 Export list ▶	 CSV
 Copy	 PDF


Copy: Copy ACL role

 Copy


Cut: Cut ACL roles to move them

 Cut

Paste: Paste copied or cut ACL roles to the current base

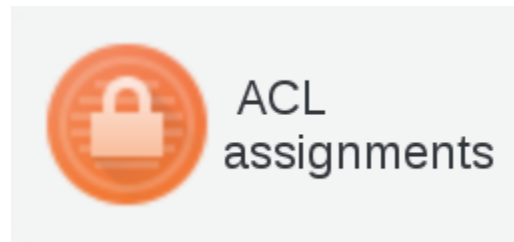
 Paste

Restore snapshots: Restore snapshots of ACL roles






 Restore snapshots

1.6.7 ACL Assignments

Click on ACL assignments icon on FusionDirectory main page









This page allows to assign ACL roles to user and manage existing assignments.

ACL assignments		
  Actions ▾		
<input type="checkbox"/>	DN	Actions
<input type="checkbox"/>	dc=demo-fusiondirectory,dc=org	 
 1		

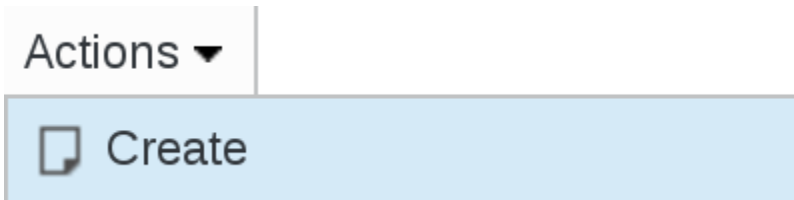
Note: Note that only existing assignments are shown here, if you want to add ACL assignment on a department which has none yet, you need to go in **Departments**, edit this object and go to the ACL tab.

Click on an ACL assignments to see its assignments

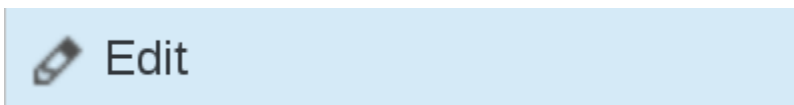
ACL Assignment		
ou=test42,dc=demo-fusiondirectory,dc=org		
Assignments on object or subtree ou=test42,dc=demo-fusiondirectory,dc=org		
subtree	cn=manager,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=rhollandais,ou=people,ou=test42,dc=demo-fusiondirectory,dc=org   
subtree	cn=student,ou=acroles,ou=test42,dc=demo-fusiondirectory,dc=org	uid=pitalienne,ou=people,ou=test42,dc=demo-fusiondirectory,dc=org   

The following actions are available:

Create ACL assignment: Create a new ACL assignment



Edit: Edit an existing ACL assignment



Remove: Delete an existing ACL assignment

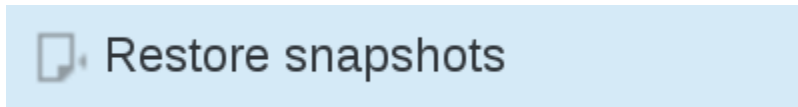


Export list

- PDF: Export the current object list as a PDF document
- CSV: Export the current object list as a CSV file

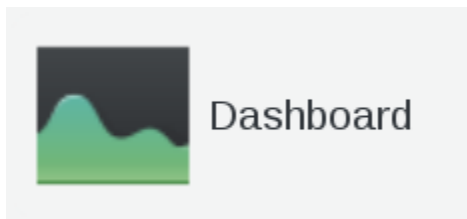
Export list ▶	CSV
Copy	PDF

Restore snapshots: Restore snapshots of ACL assignments



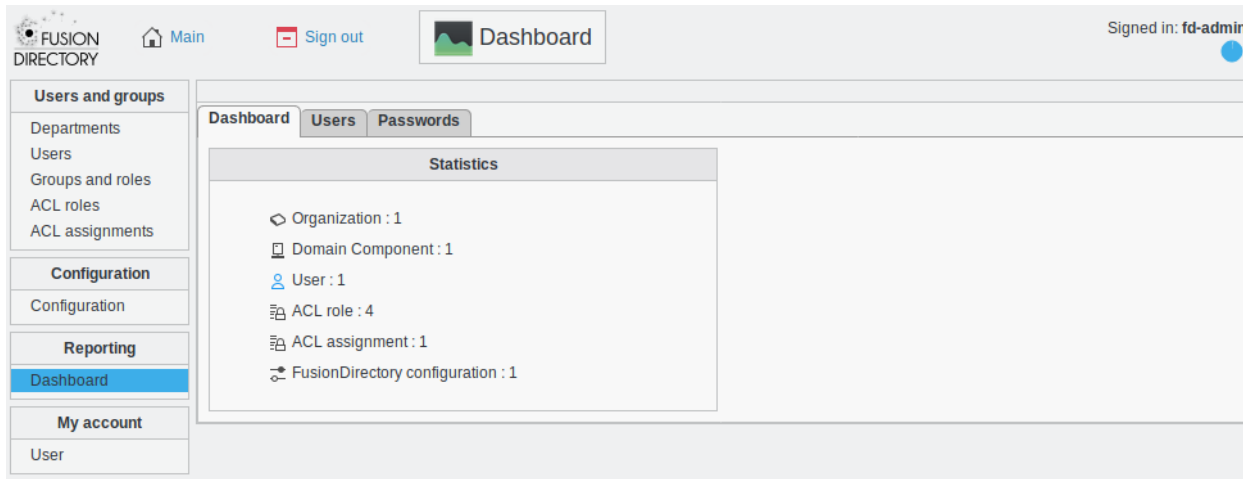
1.6.8 Dashboard

Click on Dashboard icon on FusionDirectory main page



The dashboard screen allows you to consult statistics about the content of your LDAP tree.

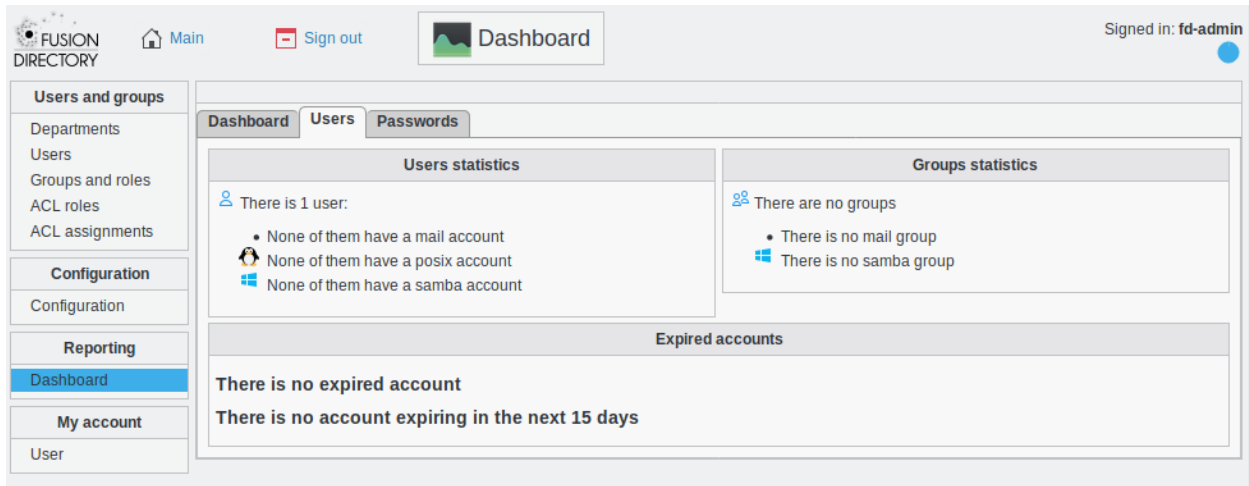
The first tab shows the number of objects for each type known to your FusionDirectory installation. Clicking them will lead you the management page for them, if any.



Users

User tab shows more detailed statistics about users.

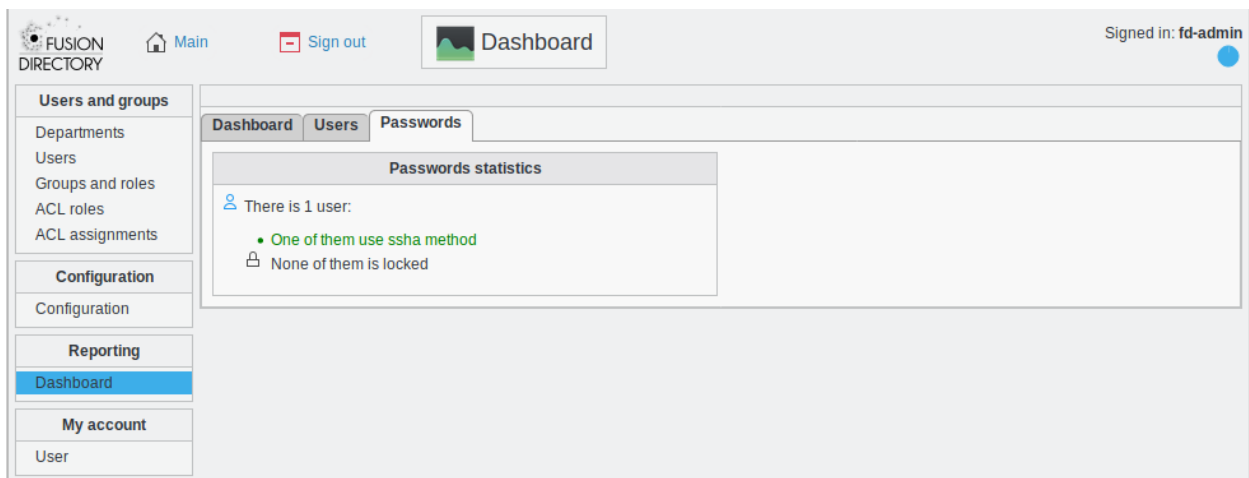
It is especially useful to track expired on soon-to-expire users, when using posix plugin.



- **Users statistics** : it shows you the number of users and the e-mail account type of each user
- **Groups statistics** : it shows you how many groups there are
- **Expired accounts** : It shows you the expired accounts and the accounts that will expire soon

Passwords

Passwords tab shows statistics about passwords, and it is especially useful for tracking old accounts still using an obsolete password method in order to update them.



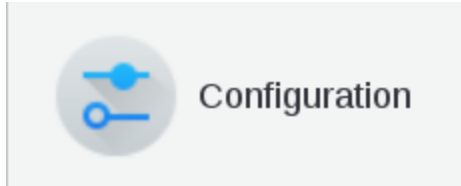
1.7 Configuration

FusionDirectory Configuration

1.7.1 Configuration

All the configuration is stored inside the ldap, in FusionDirectory branch.

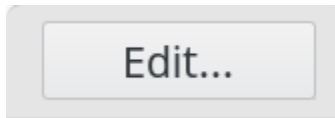
If you need to modify something, you can access to FD configuration by clicking on “Configuration” icon of the main menu.



Then click on “Configuration” Tab



You need to click on “Edit” button bottom right first to access edition and then “Ok” once you’ve finished.



Look and feel

Look and feel	
Language	Automatic ▾
Theme*	breezy ▾
Timezone*	America/New_York ▾

- **Language:** Defines the default language used by FusionDirectory. Normally FusionDirectory autodetects the language from the browser settings. If this is not working or you want to force the language, just modify the language here.
- **Theme:** (required) Defines what theme is used to display FusionDirectory pages. You can install some corporate identity like theme and/or modify certain templates to fit your needs within themes.
- **Timezone:** (required) Defines the timezone used within FusionDirectory to handle date related tasks, such as password expiration, vacation messages, etc. The timezone value should be a unix conform timezone value like in `/etc/timezone`.

Core settings

Core settings	
LDAP size limit	200
Edit locking	entryCSN
Enable logging	<input type="checkbox"/>
Schema validation	<input type="checkbox"/>
Enable snapshots	<input type="checkbox"/>
Snapshot base	ou=snapshots,dc=demo-fu:
Wildcard foreign keys	<input type="checkbox"/>

- **LDAP size limit:** Tells FusionDirectory to retrieve the specified maximum number of results. The user will get a warning, that not all entries were shown.
- **Edit locking:** Enables FusionDirectory to check if a entry currently being edited has been modified from someone else outside FusionDirectory in the meantime. It will display an informative dialog then. It can be set to *entryCSN* for OpenLDAP based systems or *contextCSN* for Sun DS based systems.
- **Enable logging:** Enables event logging on FusionDirectory side. Setting it to true, FusionDirectory will log every action a user performs via syslog. If you use rsyslog and configure it to mysql logging, you can browse all events within FusionDirectory.
- **Schema validation:** Validate the installed schema before connecting to FusionDirectory
- **Enable snapshots:** This enables you to save certain states of entries and restore them later on.
- **Snapshot base:** Defines the base where snapshots should be stored inside of the LDAP.
- **Wildcard foreign keys:** Whether to activate foreign key handling in cases where a wildcard filter is needed. For instance when moving a department containing users, this will make sure any reference to a user in this department is updated. This maintain consistency but may be a bit slow on big trees.

Password settings

Password settings	
Allowed password hashes*	<div style="border: 1px solid gray; padding: 5px;"> clear crypt/blowfish crypt/enhanced-des crypt/md5 crypt/sha-256 crypt/sha-512 crypt/standard-des empty md5 sasl sha smd5 ssha </div>
Password default hash*	<div style="border: 1px solid gray; padding: 5px;"> ssha ▼ </div>
Force default hash	<input type="checkbox"/>
Password minimum length	<input type="text" value=""/>
Password minimum differs	<input type="text" value=""/>
Use account expiration	<input type="checkbox"/>
SASL Realm	<input type="text" value=""/>
SASL Exop	<input type="text" value=""/>

- **Allowed password hashes:** (required) Defines the default password hash to choose for new accounts.

Valid values are :

- crypt/standard-des
- crypt/enhanced-des
- crypt/md5
- crypt/blowfish
- crypt/sha-256
- crypt/sha-512
- smd5
- md5

- sasl
- ssha
- sha

These values will be overridden when using templates.

- **Force default hash:** Enable/Disable force the use of the default password hash.
- **Password minimum length:** Determines the minimum length of a new password entered to be considered valid. Note that this only affect passwords that are set by the user, not by the admins.
- **Password minimum differs:** Determines how many characters that must be different from the previous password. Note that this only affect passwords that are set by the user, not by the admins.
- **Use account expiration:** Enables shadow attribute tests during the login to FusionDirectory and forces password renewal or account locking.
- **SASL Realm:** Defines the way the kerberos realm is stored in the userPassword attribute. Set it to REALM.NET in order to get {sasl}user@REALM.NET.
- **SASL Expop:** Defines the attribute to be stored in the userPasword attribute. Set it to uid in order to get the {sasl}uid of the user.

Login and session

Login and session	
Login attribute*	uid ▾
Enforce encrypted connections	<input type="checkbox"/>
Warn if session is not encrypted	<input checked="" type="checkbox"/>
Session lifetime*	1800 <input type="text"/>
Login method*	HTML form ▾
Header name	AUTH_USER

- **Login attribute:** (required) Defines which LDAP attribute is used in Fusiondirectory as the login name during login. It can be set to uid, mail or both.
- **Enforce encrypted connections:** Enables PHP security checks to force encrypted access (https) to the web interface.
- **Warn if session is not encrypted:** Enables PHP security checks to detect non encrypted access to the web interface. FusionDirectory will display a warning in this case.
- **Session lifetime:** (required) Defines when a session will expire in seconds. For Debian systems, this will not work because the sessions will be removed by a cron job instead. Please modify the value inside of your php.ini instead.
- **Login method:** (required) Which login method should be used for connecting to FusionDirectory
- **Header name:** Define the name of the header you will use for HTTP Header Authentication

SSL

SSL	
Key path	<input type="text" value="/etc/ssl/private/fd.key"/>
Certificate path	<input type="text" value="/etc/ssl/certs/fd.cert"/>
CA certificate path	<input type="text" value="/etc/ssl/certs/ca.cert"/>

- **Key path:** Path of the private key for FusionDirectory on the server.
- **Certificate path:** Path of the certificate for FusionDirectory on the server.
- **CA certificate path:** Path of the CA on the server.

CAS

CAS	
CA certificate path	<input type="text" value="/etc/ssl/certs/ca.cert"/>
Host	<input type="text" value="localhost"/>
Port	<input type="text" value="443"/>
CAS context	<input type="text" value="/cas"/>

- **CA certificate path:** Path of the CA for the CAS server.
- **Host:** Host of the CAS Server.
- **Port:** Port of the CAS Server.
- **CAS context:** CAS context to be used

People and group storage

Pay attention to the changes in this section of the configuration

People and group storage (editing this can break your LDAP)	
People DN attribute*	uid ▾
CN pattern*	%givenName% %sn%
Strict naming policy	<input type="checkbox"/>
Users RDN*	ou=people
ACL role RDN*	ou=acroles
Restrict role members	<input type="checkbox"/>
Separate address fields	<input type="checkbox"/>
Postal address pattern	<input type="text"/>
Avatar max size	200

- **People DN attribute:** (required) Defines the attribute to use at the beginning of users dn.
Possible values are *uid* and *cn*
 - *uid* style DN: `uid=superuser,ou=staff,dc=example,dc=net`
 - *cn* style DN: `cn=Foo Bar,ou=staff,dc=example,dc=net`
- **CN pattern:** The pattern to use to build the common name field.
- **Strict naming policy:** Enables strict checking of uids and group names. If you need characters like `.` or `-` inside of your accounts, don't enable this option.
- **Users RDN:** (required) Defines the location where new accounts will be created inside of defined departments. The default is `ou=people`.
- **ACL role RDN:** The branch where ACL roles are stored.
- **Restrict role members:** When enabled only users from the same branch or members of groups from the same branch can be added to a role.
- **Separate address fields:** When enabled, expose *street*, *postOfficeBox* and *postalCode* fields instead of *postalAddress*.
- **Postal address pattern:** When **Separate address fields** is enabled, filling this allows to fill *postalAddress* using values from the separate fields in a pattern.
- **Avatar max size:** Maximum user picture width and height in pixels. Bigger uploaded pictures will be resized.

Debugging

Debugging	
Display errors	<input type="checkbox"/>
Maximum LDAP query time	<input type="text" value=""/>
Log LDAP statistics	<input type="checkbox"/>
Debug level	<input type="text" value=""/>
Log debug messages	<input type="checkbox"/>

- **Display errors:** Defines whether to enable the display of PHP errors in the upper part of the screen. This should be disabled in productive deployments, because there might be some passwords in it.
- **Maximum LDAP query time:** Tells FusionDirectory to stop LDAP actions if there is no answer within the specified number of seconds.
- **Log LDAP statistics:** Tells FusionDirectory to track LDAP timing statistics to the syslog. This may help to find indexing problems or bad search filters.
- **Debug level:** Display certain debug informations on each page load. Valid values are LDAP, Database, Shell, POST, SESSION, ACL, SI, Mail. The different values can also be combined with each other.
- **Log debug messages:** Sends debug output to syslog as well

Miscellaneous

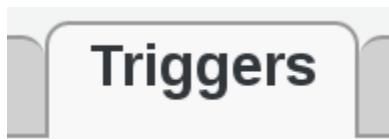
Miscellaneous

Display summary in listings	<input type="checkbox"/>	
Show ACL tab on all objects	<input type="checkbox"/>	
Available department categories		<div style="border: 1px solid #ccc; height: 80px; width: 100%;"></div>
Plugin menu blacklist		<div style="border: 1px solid #ccc; background-color: #f0f0f0; height: 100px; width: 100%;"></div>
ACL target filter limit		<div style="border: 1px solid #ccc; padding: 5px; display: inline-block;">100</div>

- **Display summary in listings:** Determines whether a status bar will be shown on the bottom of FusionDirectory generated lists, displaying a short summary of type and number of elements in the list.
- **Show ACL tab on all objects:** For very specific ACL rights setting where you might need to give rights on a single object.
- **Available department categories:** Available categories in the departments category dropdown.
- **Plugin menu blacklist:** A list of plugins to hide from FusionDirectory menu for a given group of users.
- **ACL target filter limit:** Defines the maximum number of entries an ACL target filter is allowed to return

Triggers

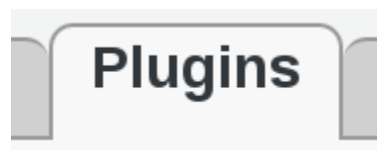
Click on Triggers tab



Triggers				
Display trigger output	<input type="checkbox"/>			
Triggers	Tab	Mode	Deactivated	Command

- **Triggers:** Defines triggers that are called when specific actions happens.
Each trigger is defined by:
 - Tab: The plugin tab triggering this trigger
 - Mode: When this trigger is triggered
 - Command: The executed command when this trigger is triggered. Use the placeholder syntax to pass attribute values to the trigger.
- **Display trigger output:** Activate to display the trigger output.

Click on Plugins tab



Object groups

Object groups	
Groups RDN*	<input type="text" value="ou=groups"/>

- **Groups RDN:** (required) Branch in which object groups will be stored.

SASL

SASL	
Force to ask for password*	<input type="checkbox"/>

- **Force to ask for password:** (required) Useful if you add a trigger using password value when SASL user passwords are edited.

Dashboard name schema

Dashboard name schema	
Number of digits	<input type="text" value="3"/>
Prefixes*	<input type="text" value="PC"/>

- **Number of digits:** Number of digits to use after prefix.
- **Prefixes:** (required) Prefixes to be used for computer ids.

Dashboard expired users

Dashboard expired users	
Number of days	<input type="text" value="15"/>

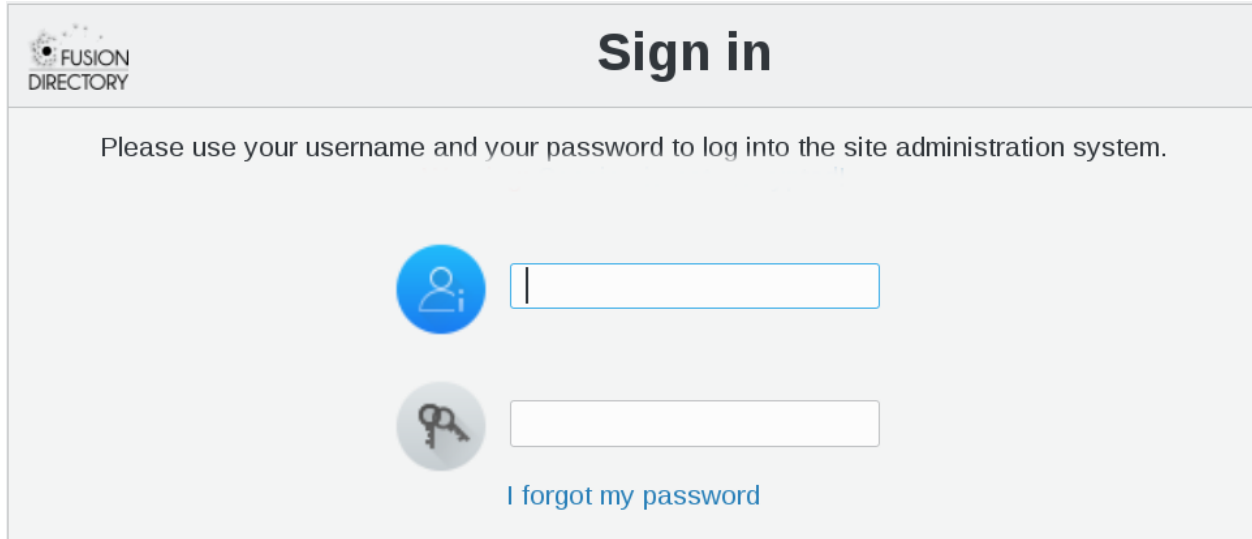
- **Number of days:** Number of days before expiration needed for an account to show in the dashboard not expired accounts list.

1.7.2 Configure Password recovery

FusionDirectory has a password recovery fonction.

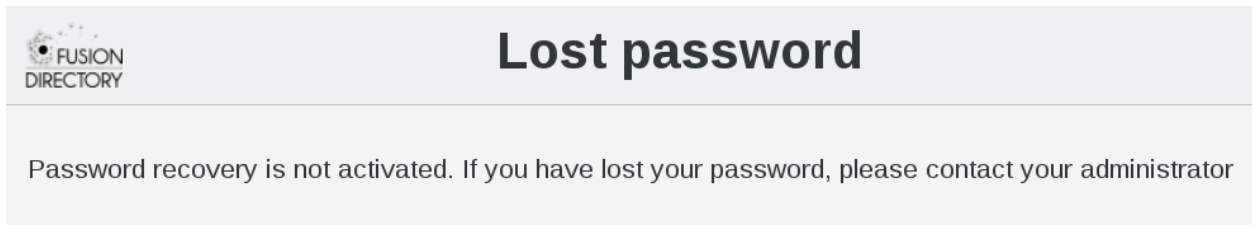
- If the Mail plugin is installed it can use the mail attribute
- If the Personal plugin is installed it can use the fdPrivateMail
- If the Supann plugin is installed it can use the supannMailPerso

In the login window of the user's connection, you will find the option "I forgot my password".



This option allows your users to generate a new password.

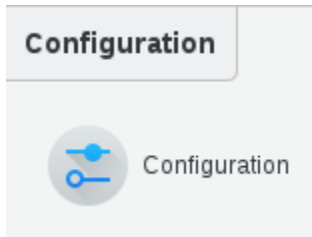
If you click on “I forgot my password” now, the following window appears :



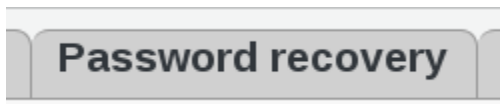
To activate the recovery of the password, the administrator must set it up

- Configuration

Connect as administrator and click on Configuration button in FusionDirectory



Go to Password recovery tab



In the next windows click on “Edit” button bottom right



Password recovery settings

Activate password recovery	<input checked="" type="checkbox"/>
Sender email address*	<input type="text" value="to.be@chang.ed"/>
Link validity (minutes)*	<input type="text" value="10"/> <input type="button" value="▲"/> <input type="button" value="▼"/>
Salt for tokens*	<input type="text" value="SomethingSecretAndVery!"/>
Allow the use of alternate addresses	<input type="checkbox"/>
Login attribute*	<input type="text" value="uid"/>

To activate password recovery you must check the box next to “Activate password recovery”

Activate password recovery



- Sender email address : e-mail address from which e-mails will be sent (required)
- Link validity (minutes) : number of minutes before a recovery link expires (required)
- Salt for tokens : just a security measure, you can put anything in there, even random characters (required)
- Allow the use of alternate addresses : if checked, users will also be able to enter one of their alternate addresses to recover their password

Fill-in First email settings

First email

Subject*	<input type="text" value="[FusionDirectory] Passwor"/>
Body (first %s is login, second is link)*	<input type="text" value="Hello,"/> <input type="text" value="Here are your"/>


- Subject : subject of the first e-mail (required)
- Body (first %s is login, second is link) : body of the first e-mail, sent when the users asks for a new password. Use % for the login and the recovery link (required)

Fill-in Second email settings

Second email	
Subject*	<input type="text" value="[FusionDirectory] Passwor"/>
Body (%s is login)*	<input type="text" value="Hello,
 Your password has been"/>


- Subject : subject of the second e-mail (required)
- Body (%s is login) : body of the first e-mail, sent to confirm that the password has been changed. Use % for the user login (required)
- Use it

Now your users can be able to use password recovery. When they will click on “I forgot my password” this windows will appear



Lost password

Enter your current e-mail address in the field below and press the 'Change' button.
=> **Use your e-mail in the long format, e.g : John Doe => john.doe@example.com**



[Return to login screen](#)

They will enter their full e-mail address and after click on “Change”

A message will appear on the screen informing your user of sending an e-mail to his address, with a link to change his password.

Your user will receive a mail like this :

```
[FusionDirectory] Password recovery link
From: reset@fusiondirectory.org
To: myname@acme.org
Hello,
Here are your informations :
- Login : myname
- Link : http://fusiondirectory.org/fusiondirectory/recovery.php?
↪uniq=KSDnZ31AYR7psZETctHNGyNkzMKfZKoxP9xpTAF5nprwwMnwF3ZH28EL9&uid=tototot&address_
↪mail=myname@acme.org
This link is only valid for 10 minutes.
```

When user will browse to the link sending him by e-mail, a message like this will appear on the screen

Now the user need to fill the required new password and then click on “Change”. A confirmation email is sent to his mailbox :

```
[FusionDirectory] Password Changed recovery successful
From: reset@fusiondirectory.org
To: myname@acme.org

Hello,
Your password has been changed.
Your login is still myname.
```

He just needs to click on “Return to login screen” to connect with his new password

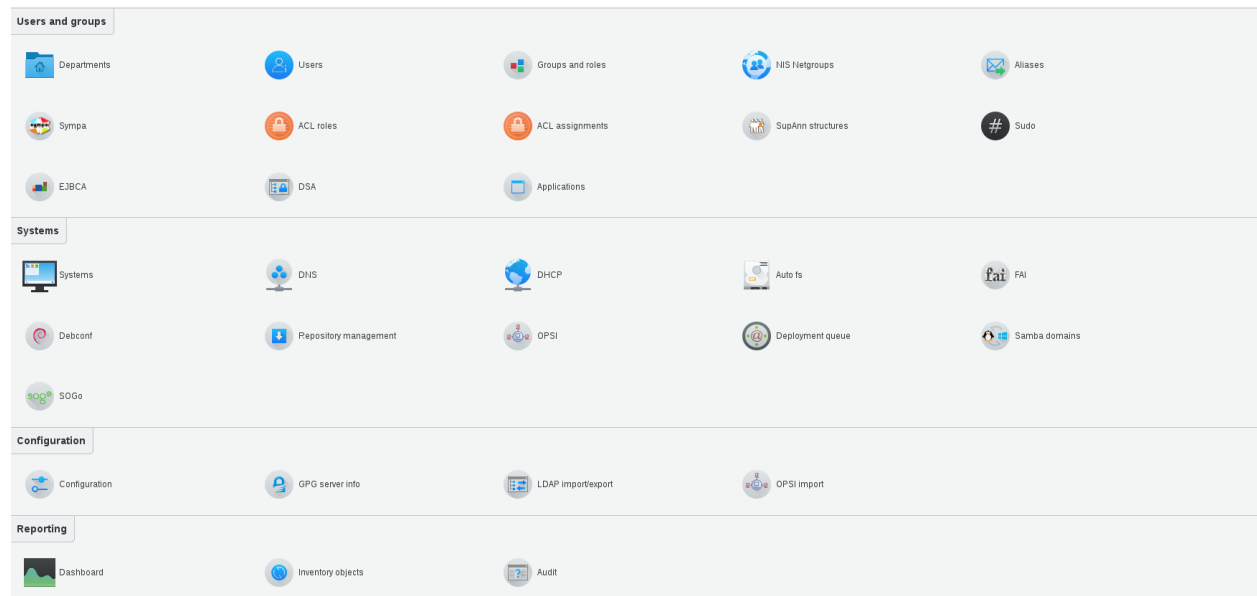
1.8 ACLs

FusionDirectory ACLs

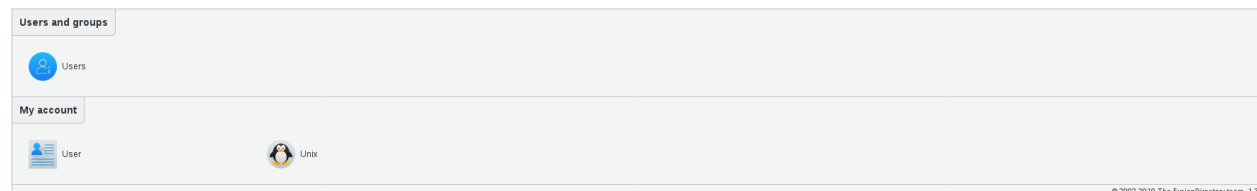
1.8.1 Introductions

FusionDirectory ACLs can be used to give rights on FusionDirectory content to other users than the admin. They can be used to allow users to edit their own information for instance, or to allow a project manager to edit the users from his team.

For example, here is the Admin view of the interface. As you can see, the Admin has access to all the plugins



And here is the Manager view. As you can see, the Manager can only access Users and groups, account and Unix

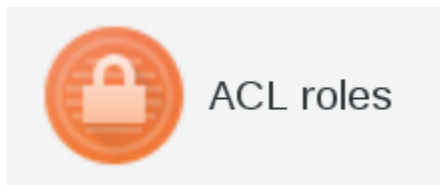


1.8.2 Functionalities

ACL roles

- What can a person do in FusionDirectory?

Click on ACL roles icon on the main page of FusionDirectory



The ACL role groups all the rights you want to give to a group or a user

You will see the list of created roles.

Each role has two columns :

- **Name** : this is the name of the role
- **Description** : a short description of what can be done by this role

<input type="checkbox"/>		Name ▾	Description
		test42 [test42]	
<input type="checkbox"/>		admin	Donner tous les droits sur tous les objets
<input type="checkbox"/>		editowninfos	Permet aux utilisateurs d'éditer leur propres informations (onglet principal et posix, à n'utiliser que sur la base)
<input type="checkbox"/>		manager	Donner tous les droits sur les utilisateurs de cette branche

Click on a role, in this example manager; you will be on Role tab

Properties settings

Properties	
Base	<input type="text" value="/"/>
Name*	<input type="text" value="manager"/>
Description	<input type="text" value="Donner tous les droits sur les utilisateurs de cette branche"/>

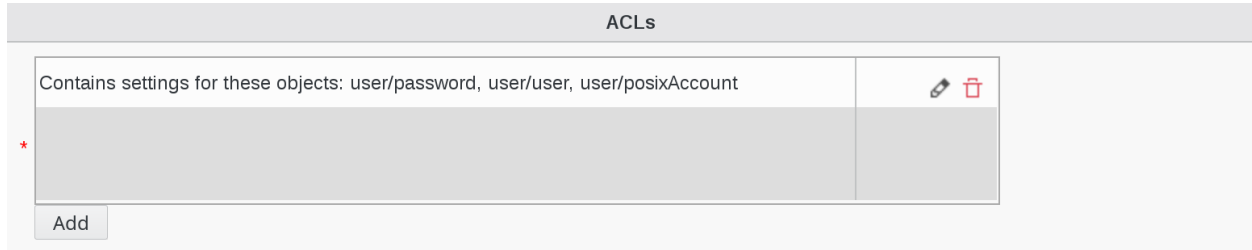
- **Base** : object base

If you put the cursor on the base field, you will see all the base objects and you will be able to choose the one that you need.

- **Name** : a name for this role (required)
- **Description** : short description of this role

ACLs settings

This field is very important because it defines the settings of the rights that this role has and the objects that it can manage



In order to see the list of ACL categories assigned to this role, click on the little pencil on the right



This will bring you to the whole list of available ACL categories. Scroll down to see the categories assigned to this role.

In this example, User is assigned to this role and it is marked as “ACL for these objects: posixAccount, user”.



Click on the little pencil next to User category on the right

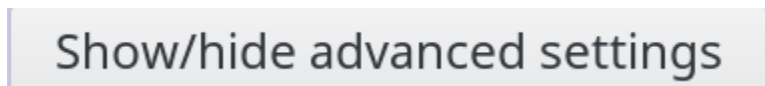


This will give you a simplified view of Object User attributes, highlighted in purple



The **beauty** and the **strength** of FusionDirectory is that you can also play on each single attribute of the object.

To do this, click on “Show/hide advances settings” button on next to the object you are interested in



This wil open a dialog including all the object settings and you can check/uncheck the ones you need

Object: User		Show/hide advanced settings
<input checked="" type="checkbox"/> Create objects <input checked="" type="checkbox"/> Move objects <input checked="" type="checkbox"/> Remove objects <input type="checkbox"/> Grant permission to owner		Complete object: <input checked="" type="checkbox"/> read <input checked="" type="checkbox"/> write
hidden (cn) <input type="checkbox"/> read <input type="checkbox"/> write	Last name of this user (sn) <input type="checkbox"/> read <input type="checkbox"/> write	First name of this user (givenName) <input type="checkbox"/> read <input type="checkbox"/> write
Short description of the user (description) <input type="checkbox"/> read <input type="checkbox"/> write	The avatar for this user (jpegPhoto) <input type="checkbox"/> read <input type="checkbox"/> write	Location (l) <input type="checkbox"/> read <input type="checkbox"/> write
State (st) <input type="checkbox"/> read <input type="checkbox"/> write	Business postal address (postalAddress) <input type="checkbox"/> read <input type="checkbox"/> write	Room number (roomNumber) <input type="checkbox"/> read <input type="checkbox"/> write
Business phone number (telephoneNumber) <input type="checkbox"/> read <input type="checkbox"/> write	Business mobile number (mobile) <input type="checkbox"/> read <input type="checkbox"/> write	Business pager number (pager) <input type="checkbox"/> read <input type="checkbox"/> write
Business fax number (facsimileTelephoneNumber) <input type="checkbox"/> read <input type="checkbox"/> write	Personal homepage (labeledURI) <input type="checkbox"/> read <input type="checkbox"/> write	Login of this user (uid) <input type="checkbox"/> read <input type="checkbox"/> write
Preferred language (preferredLanguage) <input type="checkbox"/> read <input type="checkbox"/> write	Password of the user (userPassword) <input type="checkbox"/> read <input type="checkbox"/> write	Name this user should appear as. Used by Exchange. (displayName) <input type="checkbox"/> read <input type="checkbox"/> write
Home postal address (homePostalAddress) <input type="checkbox"/> read <input type="checkbox"/> write	Home phone number (homePhone) <input type="checkbox"/> read <input type="checkbox"/> write	Title of a person in their organizational context. Each title is one value of this multi-valued attribute (title) <input type="checkbox"/> read <input type="checkbox"/> write
Organization (o) <input type="checkbox"/> read <input type="checkbox"/> write	Organizational unit this user belongs to (ou) <input type="checkbox"/> read <input type="checkbox"/> write	Department number (departmentNumber) <input type="checkbox"/> read <input type="checkbox"/> write
Employee number (employeeNumber) <input type="checkbox"/> read <input type="checkbox"/> write	Employee type (employeeType) <input type="checkbox"/> read <input type="checkbox"/> write	Manager (manager) <input type="checkbox"/> read <input type="checkbox"/> write
User lock status (userLock) <input type="checkbox"/> read <input type="checkbox"/> write		

Then you have a part for each user tab depending on your installed plugins. The **Create** right on a tab allows to activate it while the **Remove** one allows to deactivate. The **Grant permission** to owner checkbox allows to give rights only on the user's own node as in the editowninfos role we used earlier.

Special cases about rights

Template

The template part is available for objects which support templates and allow to give rights on templates, and control rights on the template_cn field.

To be able to create a user using a template, the connected user needs:

- Read right of user/template:template_cn on the template object (or any parent department)
- Create right of user/user on the base the user is created in (or any parent department)
- Write right of the fields required by the templates on the base the user is created in (or any parent department)

Snapshot

There is a Snapshot part for objects which supports snapshots.

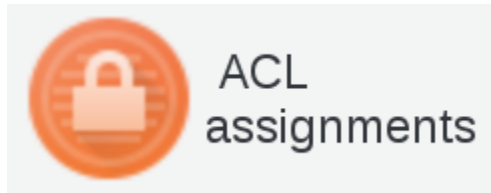
- Create right means the user will be able to take new snapshots
- Delete right means he will be able to delete existing snapshots
- Write right on restore_over field means he will be able to restore snapshots of an existing object
- Write right on restore_deleted field means he will be able to restore snapshots of deleted objects

ACL assignments

- How to assign ACLs

After the creation of a role, we can say what a person has the right to do.

Click on ACL Assignments icon in FusionDirectory



You will see the list of ACL Assignments

<input type="checkbox"/>		Name ▾	Description	Actions
<input type="checkbox"/>		. [ACL Assignment]	fusiondirectory	
<input type="checkbox"/>		templates [ACL Assignment]		
<input type="checkbox"/>		test42 [ACL Assignment]	test42	

Click on an ACL Assignment, in this example test42 and you will see three columns

ACL Assignment		
Assignments on object or subtree ou=test42,dc=demo-fusiondirectory,dc=org		
subtree	cn=manager,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org

- **first column** : on what mode of operation the LDAP will work
- **second column** : the dn of the role. It defines the rights assigned to the person in column 3 in relation to the ACLs assigned to him
- **third column** : person to which the ACL is assigned

ACL filter

We have 2 kind of filters:

- Restrict users with filter
- Restrict targets with filter

Restrict users with filter

Restrict users with filter can be used to restrict members to the one matching this filter.

- This is a **fixed filter** with no support for template matching.
- Example: (eduPersonAffiliation=student) to limit to users with student supann affiliation. This may be used when «all users» is checked, or when the members contain groups in which there are students and non-students.

Restrict targets with filter

Restrict targets with filter can be used to restrict target objects on which rights are given.

- This is a **template pattern** which may use any user field.
- Example: (manager=%dn%) on base with subtree, will only give rights on objects of which we are manager. It may be smarter to put add an objectClass check in the filter. An other example is (memberUid=%uid%) to give rights on groups the user is member of.

For target filter, people should avoid using a field that users can edit in the filter like (something=%description%) if users are allowed to edit their description.

Also, target filter should not match more than the sizelimit, so it should not be used for something too general like (eduPersonAffiliation=student), because that will match a lot of LDAP node and FD will attempt at storing an ACL for each of them in RAM. (user filter have no such restriction because they are only tested on the logged in user).

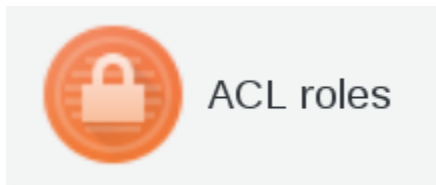
1.8.3 Create ACLs

- How to create an ACL role

To give rights to users, the first step is to define an ACL role which will list the permissions you want to give.

Now let's get more into the details of which kind of permission an ACL role can give.

Click on ACL roles icon on FusionDirectory main page



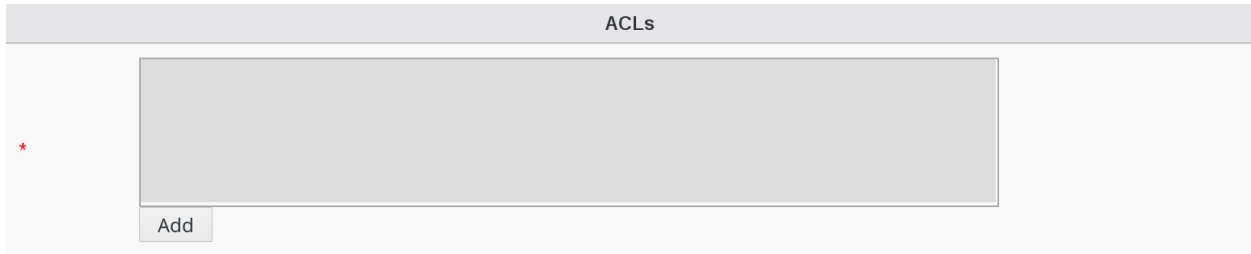
Click on Actions -> Create -> ACL role



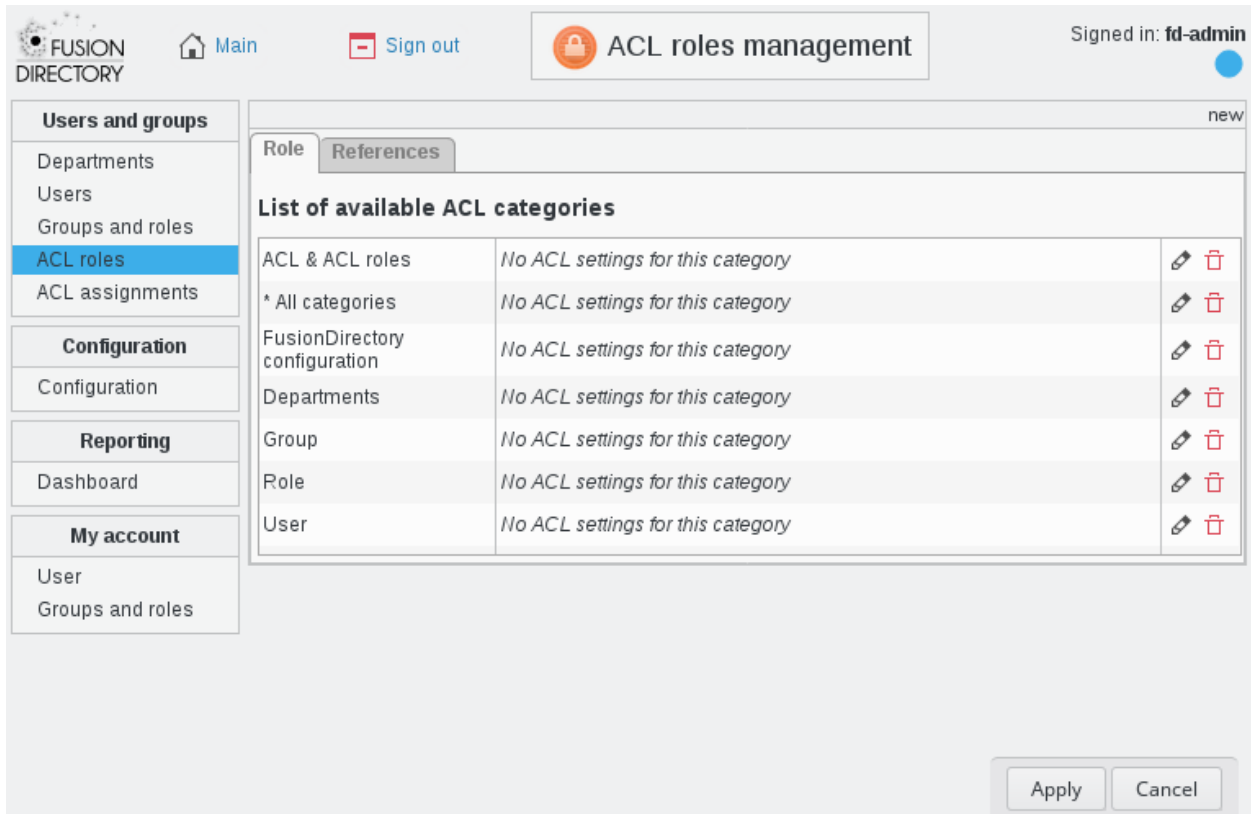
Fill name and description as you see fit.\

Properties	
Base	<input type="text" value="/test42"/>
Name*	<input type="text" value="student"/>
Description	<input type="text" value="Student can change his phone number"/>

Click **Add** button bottom left ACLs



You will see a screen listing the ACL categories:



Click on pencil icon next to User category



Then you have a part for each user tab depending on your installed plugins. The **Create** right on a tab allows to activate it while the **Remove** one allows to deactivate.

The **Grant permission to owner** checkbox allows to give rights only on the user's own node as in the editowninfos role we used earlier.

In this case we want to create a role named student having the rights to read and write his phone number.

Role **References** LDAP

Edit ACL for "User"

Toggle C		Toggle M		Toggle D		Toggle R		Toggle W		R+		W+	
C+	C-	M+	M-	D+	D-	R+	R-	W+	W-	R+	R-	W+	W-

Object: EJBCA Show/hide advanced settings

Create objects Move objects Remove objects Grant permission to owner Complete object: read write

Object: Template Show/hide advanced settings

Create objects Move objects Remove objects Complete object: read write

Object: GPG Show/hide advanced settings

Create objects Move objects Remove objects Grant permission to owner Complete object: read write

Object: Newsletter Show/hide advanced settings

Create objects Move objects Remove objects Grant permission to owner Complete object: read write

Object: Certificates Show/hide advanced settings

Create objects Move objects Remove objects Grant permission to owner Complete object: read write

Object: User Show/hide advanced settings

Create objects Move objects Remove objects Grant permission to owner Complete object: read write

Check the box against Grant permission to owner

Object: User

Create objects Move objects Remove objects Grant permission to owner

Go to object User and click on Show/hide advanced settings button

Show/hide advanced settings

Check read and write options in Business mobilenummer

Business mobile number (mobile)

read write

Click on Apply button

Apply

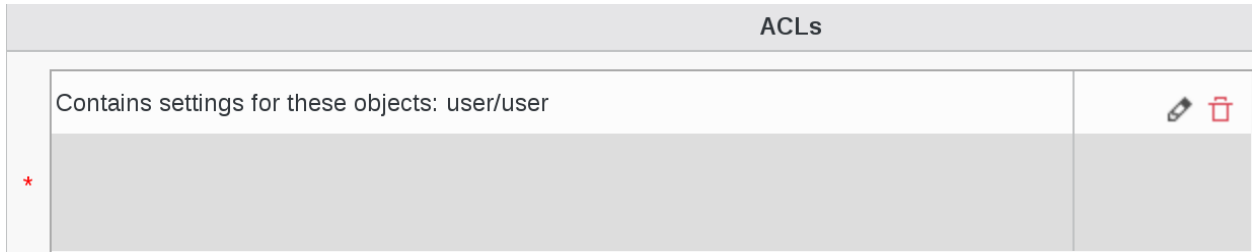
Now, on the List of available ACL categories you can see that User category changed to ACL for these objects: user

User | **ACL for these objects: user**

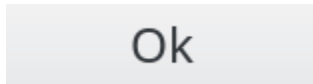
Click on Apply button

Apply

Now you can see that ACL's settings are filled-in



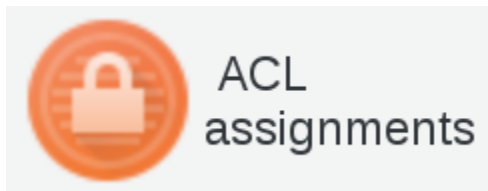
Click on Ok button bottom right



1.8.4 Use ACLs

ACLs Assignment

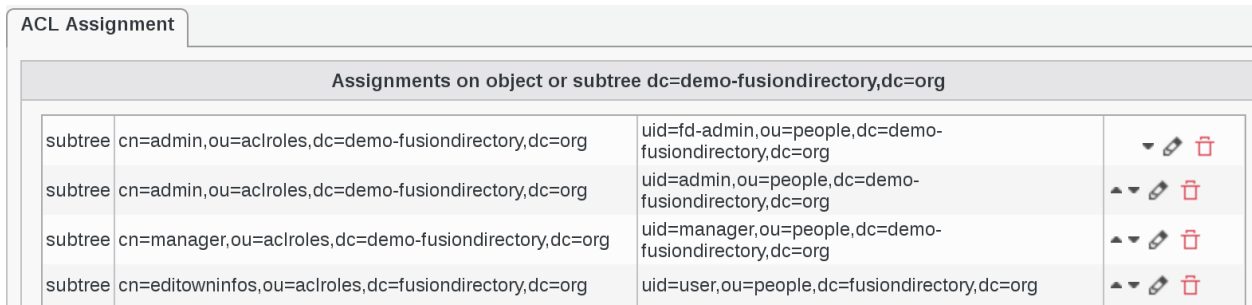
Click on ACL assignments on FusionDirectory main page



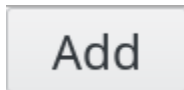
Click on the ACL assignment that you need



ACL Assignment tab you can see all the assignments



Click on Add button bottom left



Select ACL Assignment properties as follows

- **Mode** : subtree
- **Role** : student

ACL Assignment

Properties

Mode*


Role*

For all users

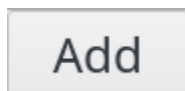
Members*

Select a user by clicking on Add button under Members field

Select the user to whom you wish to assign student role (in this example, leheros toto)

<input type="checkbox"/>	Name ▾	Login	Description
<input checked="" type="checkbox"/>	 leheros toto	toto	

Click on Add button bottom right



In ACL Assignment tab you can now see toto in Members field

Members*
















toto

Click on Add button bottom right

Add

You can see that ACL Assignment tab is now correctly filled

ACL Assignment

Assignments on object or subtree dc=demo-fusiondirectory,dc=org			
subtree	cn=admin,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=fd-admin,ou=people,dc=demo-fusiondirectory,dc=org	  
subtree	cn=admin,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	  
subtree	cn=manager,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org	  
subtree	cn=editowninfos,ou=aclroles,dc=fusiondirectory,dc=org	uid=user,ou=people,dc=fusiondirectory,dc=org	  
subtree	cn=student,ou=aclroles,ou=test42,dc=demo-fusiondirectory,dc=org	uid=toto,ou=people,ou=test42,dc=demo-fusiondirectory,dc=org	  

Click on Ok button bottom right to save

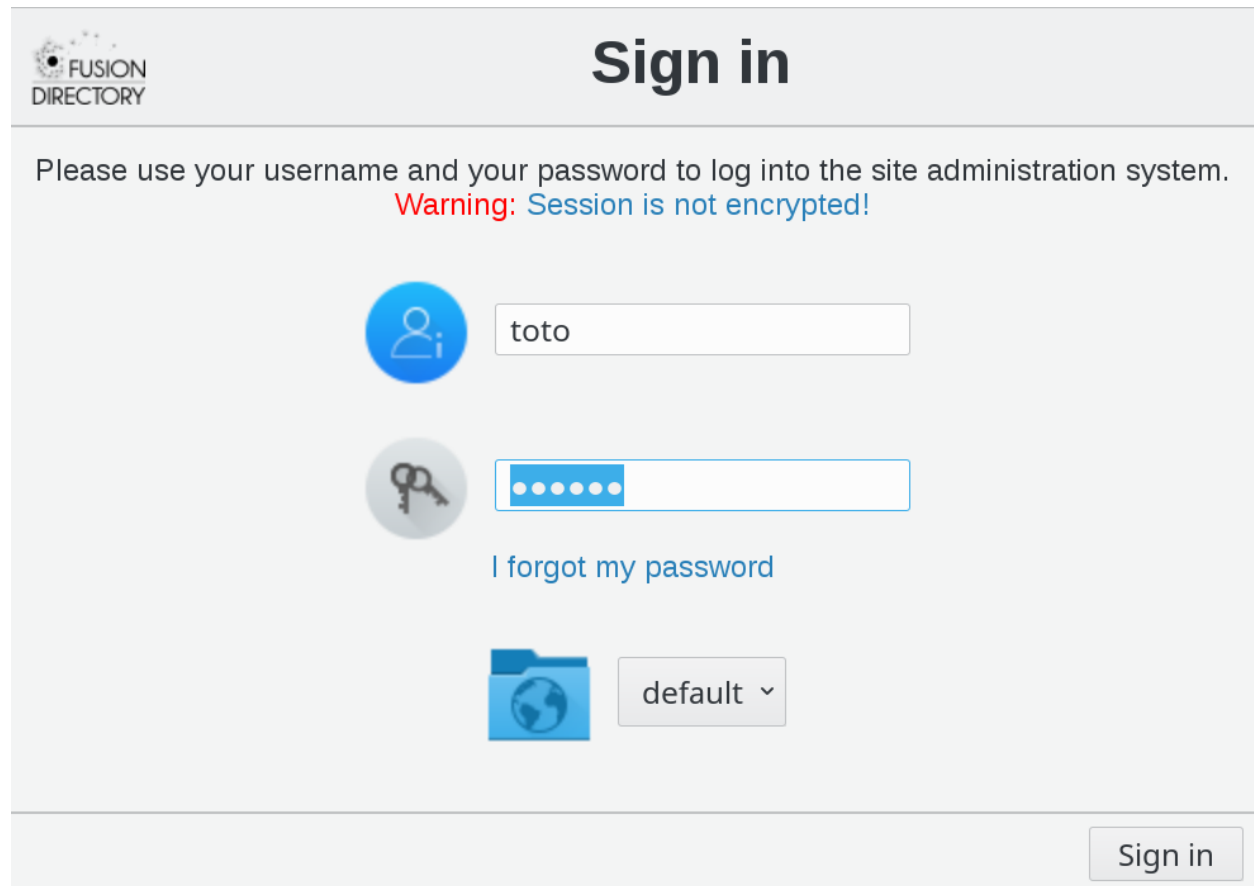
Ok

Result

- User view

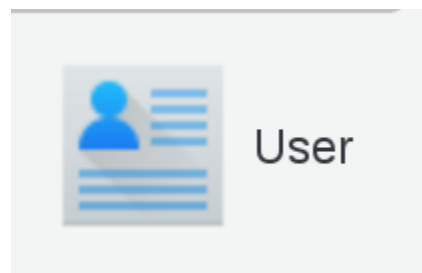
Now let's see how the ACL has been applied to our User

Login as toto

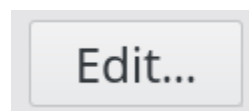


The image shows the Fusion Directory 'Sign in' page. At the top left is the Fusion Directory logo. The main heading is 'Sign in'. Below the heading, there is a message: 'Please use your username and your password to log into the site administration system.' followed by a warning: 'Warning: Session is not encrypted!'. The form contains three input fields: a username field with the text 'toto', a password field with masked characters, and a dropdown menu with 'default' selected. There is a 'Sign in' button at the bottom right. A link 'I forgot my password' is located below the password field.

Click on User icon



Click on Edit button bottom right



You will see that the only editable field is Mobile (this user can only modify his mobile number as per the ACL that we set earlier)

Organizational contact information

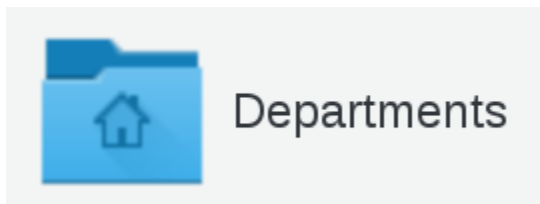
Location	<input type="text"/>
State	<input type="text"/>
Address	<input style="width: 90%;" type="text"/>
Room No.	<input type="text"/>
Phone	<input type="text"/>
Mobile	<input type="text"/>
Pager	<input type="text"/>
Fax	<input type="text"/>
Homepage	<input type="text"/>

1.8.5 Use ACLs with department

delegate department management

So, let's say you want to give manager rights to user **Richard Hollandais** to the branch **ou=test42,dc=demo-fusiondirectory,dc=org**

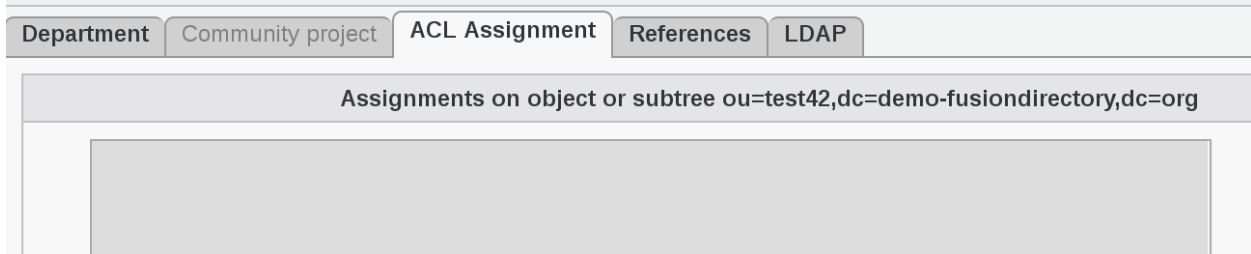
Start by clicking on Departments icon on FusionDirectory main page



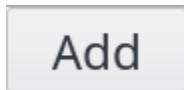
Then click on edit icon (pencil) against test42 department line

<input type="checkbox"/>		test42	test42	
--------------------------	--	--------	--------	--

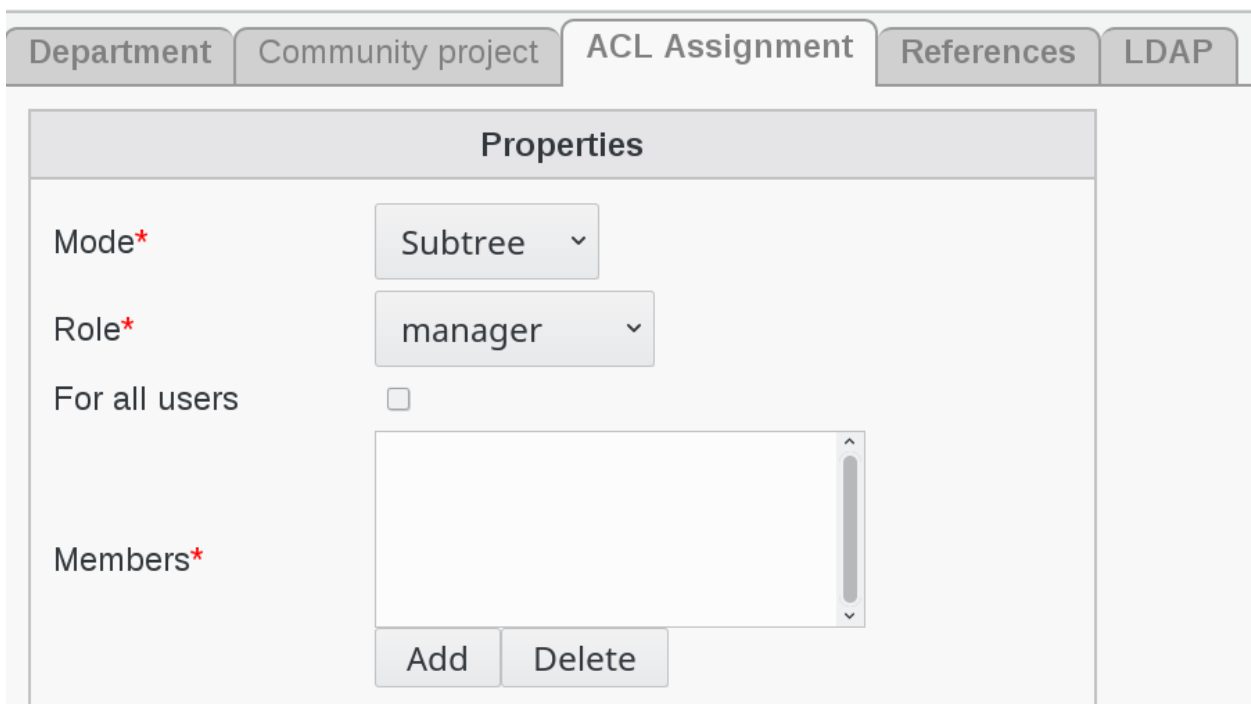
Go to ACL Assignment tab.



Click on Add button bottom left

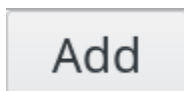


Fill-in ACL Assignment tab settings

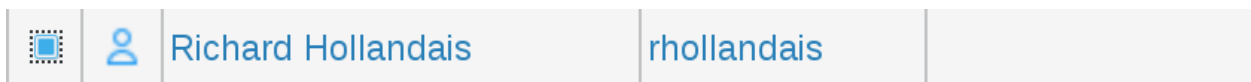


- **Mode** : subtree
- **Role** : manager
- **Members** : rhollandais

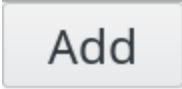
In order to select members, click on add button against member



Select user Richard Hollandais from the users list



Click on Add button bottom right



Click again on Add button bottom right

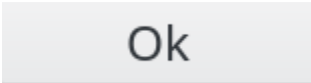
You can now see the ACL Assignment tab filled with role manager for user Richard Hollandais

Department Community project **ACL Assignment** References LDAP

Assignments on object or subtree ou=test42,dc=demo-fusiondirectory,dc=org


subtree	cn=manager,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=rhollandais,ou=people,ou=test42,dc=demo-fusiondirectory,dc=org	
---------	---	--	--

Click on Ok button bottom right




Result


Now in order to see that Manager Richard Hollandais can manage student Paola Italienne, let's sign in FusionDirectory as rhollandais




Sign in

Please use your username and your password to log into the site administration system.
Warning: Session is not encrypted!





I forgot my password



As manager role, he can see Users icon on his interface

The screenshot shows the FusionDirectory main page. At the top left is the FusionDirectory logo. Next to it are links for 'Main' (with a home icon) and 'Sign out' (with a red square icon). On the right, a welcome message says 'Welcome Richard Hollandais!' with a home icon. Below the navigation is a sidebar menu with 'Users and groups' and 'My account'. The main content area shows 'Users and groups' with a blue user icon and 'My account' with a 'User' icon and a 'Unix' icon (a penguin).

Click on Users icon and you will see the users Richard can manage

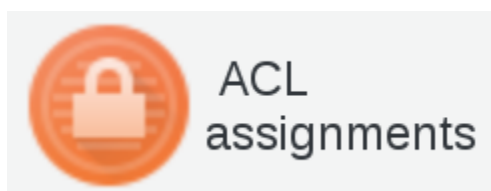
The screenshot shows the 'Users' management page. At the top, there are navigation icons (back, forward, refresh) and a search bar containing '/test42'. An 'Actions' dropdown menu is visible. Below is a table with columns: Surname, Given name, Login, Properties, and Actions.

<input type="checkbox"/>	Surname ▼	Given name	Login	Properties	Actions
	History [History students]				
<input type="checkbox"/>	Hollandais	Richard	rhollandais		
<input type="checkbox"/>	Italienne	Paola	pitalienne		

1.8.6 ACLs Assignment with user filter

ACLs Assignment

Click on ACL assignments on FusionDirectory main page



Click on the ACL assignment that you need

The screenshot shows a table with one row representing an ACL assignment. It includes a checkbox, a lock icon, the name '[ACL Assignment]', the domain 'fusiondirectory', and action icons for edit, lock, refresh, and delete.

<input type="checkbox"/>		[ACL Assignment]	fusiondirectory	
--------------------------	--	------------------	-----------------	--

ACL Assignment tab you can see all the assignments

ACL Assignment		
Assignments on object or subtree dc=demo-fusiondirectory,dc=org		
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=fd-admin,ou=people,dc=demo-fusiondirectory,dc=org
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org
subtree	cn=manager,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org
subtree	cn=editowninfos,ou=acroles,dc=fusiondirectory,dc=org	uid=user,ou=people,dc=fusiondirectory,dc=org

Click on Add button bottom left



Select ACL Assignment properties as follows

- **Mode** : subtree
- **Role** : student
- **All users** : ticked

Properties

Mode* Subtree ▼

Role* student ▼

For all users

Members*

Add Delete

Add your member filter as follows

- **Member filter:** (uid=toto)

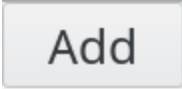
Advanced

These options allow you to restrict members or targets by LDAP filter. The member filter cannot use masks, and is safe to return any number of results as it will only be applied to the logged in user. For target filter, please avoid using a filter returning too many results, and if using template masks, avoid doing so on user-editable fields.

Member filter

Target filter

Click on Add button bottom right

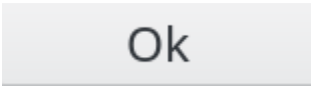


You can see that ACL Assignment tab is now correctly filled

Assignments on object or subtree dc=demo-fusiondirectory,dc=org			
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=fd-admin,ou=people,dc=demo-fusiondirectory,dc=org	
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	
subtree	cn=manager,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org	
subtree	cn=editowninfos,ou=acroles,dc=fusiondirectory,dc=org	uid=user,ou=people,dc=fusiondirectory,dc=org	
subtree	cn=student,ou=acroles,dc=demo-fusiondirectory,dc=org	*	(uid=toto)

Add

Click on Ok button bottom right to save




Result

- User view


Now let's see how the ACL has been applied to our User


Login as toto




Sign in

Please use your username and your password to log into the site administration system.
Warning: Session is not encrypted!

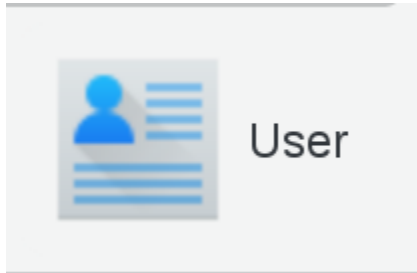




I forgot my password



Click on User icon



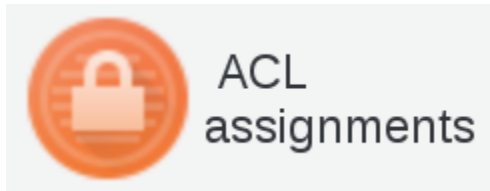
We only have our mobile info because we assign ACL Role student for everyone but it applied only for (uid=toto)

Account Information		Organizational contact Information	
Base	/	Mobile	

1.8.7 ACLs Assignment with target filter

ACLs Assignment

Click on ACL assignments on FusionDirectory main page



Click on the ACL assignment that you need

<input type="checkbox"/>		[ACL Assignment]	fusiondirectory				
--------------------------	--	------------------	-----------------	--	--	--	--

ACL Assignment tab you can see all the assignments

ACL Assignment					
Assignments on object or subtree dc=demo-fusiondirectory,dc=org					
subtree	cn=admin,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=fd-admin,ou=people,dc=demo-fusiondirectory,dc=org			
subtree	cn=admin,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org			
subtree	cn=manager,ou=aclroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org			
subtree	cn=editowninfos,ou=aclroles,dc=fusiondirectory,dc=org	uid=user,ou=people,dc=fusiondirectory,dc=org			

Click on Add button bottom left



Select ACL Assignment properties as follows

- **Mode** : subtree
- **Role** : manager

- **Members** : toto

Properties

Mode* Subtree ▾

Role* manager ▾

For all users

Members*

👤 toto leheros

Add
Delete

Add your target filter as follows

- **Member filter:** (manager=%dn%)

Advanced

These options allow you to restrict members or targets by LDAP filter. The member filter cannot use masks, and is safe to return any number of results as it will only be applied to the logged in user. For target filter, please avoid using a filter returning too many results, and if using template masks, avoid doing so on user-editable fields.

Member filter

Target filter

Click on Add button bottom right

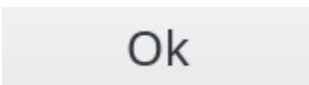


You can see that ACL Assignment tab is now correctly filled

Assignments on object or subtree dc=demo-fusiondirectory,dc=org					
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=fd-admin,ou=people,dc=demo-fusiondirectory,dc=org			▾ 🔍 🗑️
subtree	cn=admin,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org			↕ 🔍 🗑️
subtree	cn=manager,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=manager,ou=people,dc=demo-fusiondirectory,dc=org			↕ 🔍 🗑️
subtree	cn=editowninfos,ou=acroles,dc=fusiondirectory,dc=org	uid=user,ou=people,dc=fusiondirectory,dc=org			↕ 🔍 🗑️
subtree	cn=student,ou=acroles,dc=demo-fusiondirectory,dc=org	*	(uid=toto)		↕ 🔍 🗑️
subtree	cn=manager,ou=acroles,dc=demo-fusiondirectory,dc=org	uid=toto,ou=people,dc=demo-fusiondirectory,dc=org	(manager=%dn%)		↕ 🔍 🗑️

Add

Click on Ok button bottom right to save

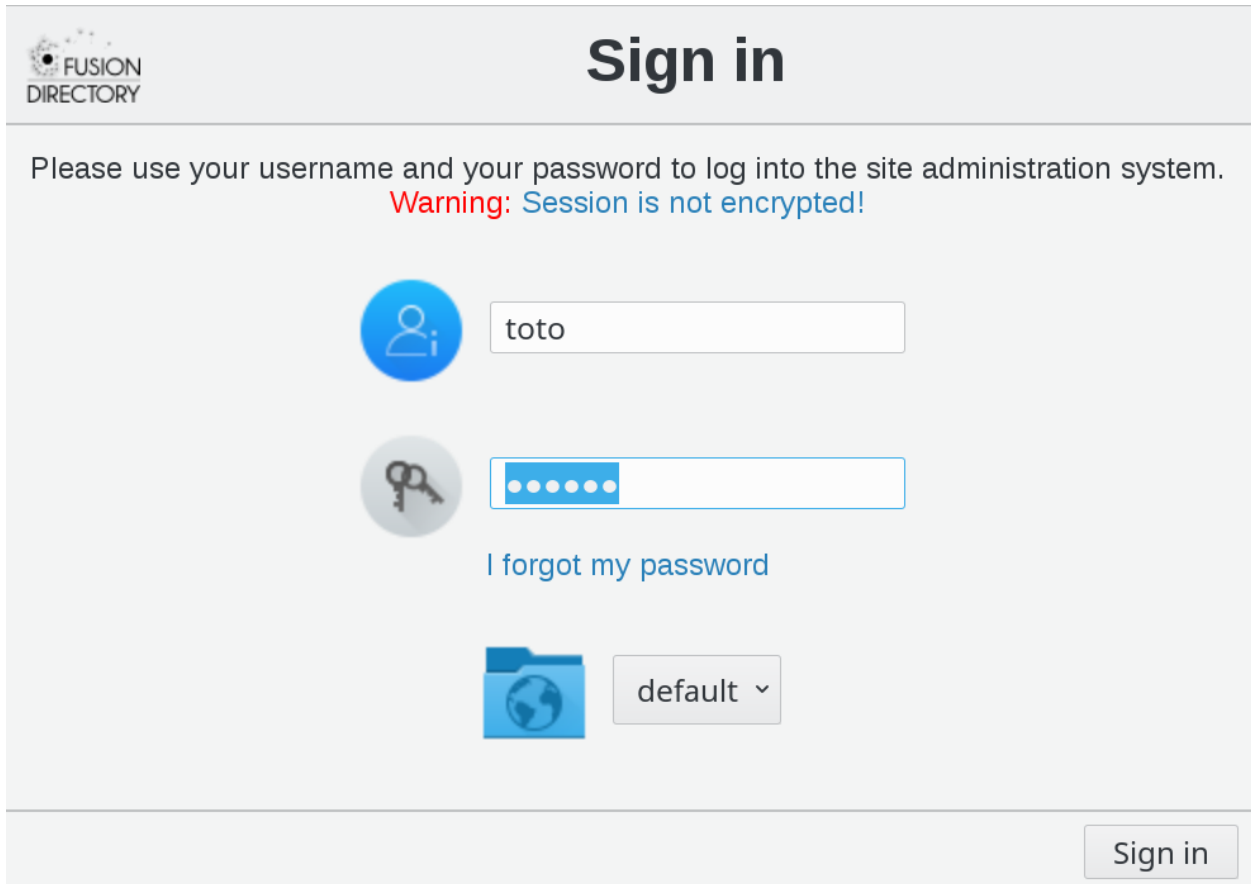


Result

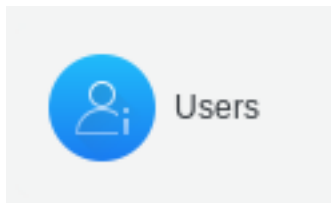
- User view

Now let's see how the ACL has been applied to our User

Login as toto



Click on User icon to manage them



We see that we can manage another user because the target filter give the manager right for the objects where (manager=%dn%) match (%dn% mean our own dn)

Users						
Base / Actions						
<input type="checkbox"/>	Last name	First name	Login	Properties	Actions	
<input type="checkbox"/>						
<input type="checkbox"/>	paul	dufour	admin			
2						

1.9 Plugins

FusionDirectory Plugins

1.9.1 Alias

FusionDirectory Plugins Alias

Description

This plugin is used in the management of two types of aliases:

- Mailbox redirection (e.g. when a person leaves the company) from alias FORWARD TO another/s mail address
- Mailbox distribution when receive a message for alias SEND TO mailbox in mail-server

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-alias
yaourt -S fusiondirectory-plugin-alias-schema
```

Debian

```
apt-get install fusiondirectory-plugin-alias
apt-get fusiondirectory-plugin-alias-schema
```

RHEL

```
yum install fusiondirectory-plugin-alias
yum install fusiondirectory-plugin-alias-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd-conf.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd-conf.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd-conf.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/alias-fd.schema
```

Configuration

No configuration needed for this plugin.

Functionalities

- Alias create temporary mail

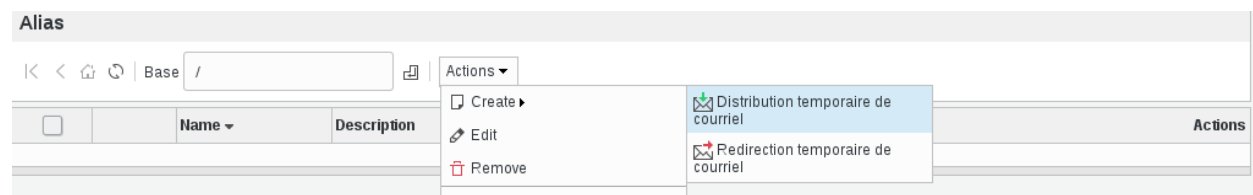
For example, we need that all mails send to:

- myboss.sharedbox@acme.com (mail attribute)
- myboss@acme.com (gosaMailAlternateAddress)

are delivered to:

- bigboss@acme.com (mail Attribute) mailbox on mailbox.server.com (gosaMailServer)

Click on the 'Aliases' entry or icon, in administration section, to join the 'Alias management' page. Now you can add a new Mailbox distribution via 'Actions -> Create -> Temporary Mail distribution' (or modify the existing ones)



A new dialog is open:

- Alias create temporary mail view

Distribution temporaire d... Références LDAP

Mail distribution

Base: /

Name*:

Description:

Email address*:

Email aliases*:

Add Delete

Mail server: ▼

Expiration date:

- Base: Object base
- Name: Name to identify this alias (required)
- Description: Description of this alias
- Email address: Email address (required)
- Email aliases: Aliases of this email address (required)
- Mail server: Mail server for this alias (required)
- Expiration date: Date after which the distribution should be deleted. Leave empty for no deletion.

Temporary mail distribution Références LDAP

Mail distribution

Base: /

Name*: myboss

Description: mail distribution for myboss

Email address*: bigboss@acme.com

Email aliases*: myboss.sharedbox@acme.com
myboss@acme.com

Add Delete

Mail server: ▼

Expiration date: 17.04.2019

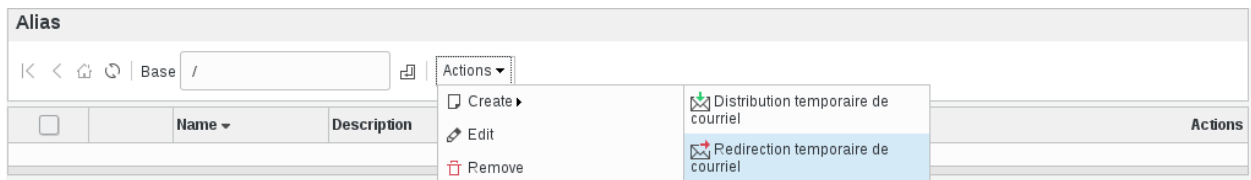
- Alias create temporary mail redirection
- For example we need to forward (duplicate and send) all mails send to :

- it.support@acme.com
- it.team@acme.com
- it.help@acme.com

towards:

- technician1@acme.com
- technician2@acme.com
- technician3@acme.com

Click on the entry or on the icon in administration section to join the 'Alias management' page. Now you can add a new Mailbox redirection via 'Actions → Create → Temporary Mail redirection' (or modify the existing ones):



- Alias create temporary mail redirection view

Redirection temporaire de... Références LDAP

Mail redirection

Base: /

Name*

Description

Redirect from*

Redirect to*

Expiration date

- Base: Object base
- Name: (required) Name to identify this redirection.
- Description: Description of this redirection.
- Redirect from: (required) Mail address from which you want to redirect. This means the mail alias.
- Redirect to: (required) Destination of this redirection.
- Expiration date: Date after which the redirection should be deleted. Leave empty for no deletion.

Fill the required information, for the above example :

- Alias create temporary mail redirection filled

Temporary mail redirection
References
LDAP

Mail redirection

Base	<input type="text" value="/"/>
Name*	<input type="text" value="technicians"/>
Description	<input style="width: 100%; height: 20px;" type="text"/>
Redirect from*	<div style="border: 1px solid #ccc; padding: 2px;"> it.support@acme.com it.team@acme.com it.help@acme.com </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 5px;"> <input style="width: 60%; height: 20px;" type="text"/> Add Delete </div>
Redirect to*	<div style="border: 1px solid #ccc; padding: 2px;"> technician1@acme.com technician2@acme.com technician3@acme.com </div> <div style="display: flex; justify-content: space-between; align-items: center; margin-top: 5px;"> <input style="width: 60%; height: 20px;" type="text"/> Add Delete </div>
Expiration date	<input style="width: 60%; height: 20px;" type="text" value="17.04.2019"/> <input style="width: 20px; height: 20px; border: 1px solid #ccc;" type="text"/>

Aliases

< > ↺ ↻
Base
Actions ▼

	Name ▼	Description	Expiration date	Actions
<input type="checkbox"/>	technicians		17.04.2019	✂ 📄 ✎ 🗑
✉ 1				

1.9.2 Applications

FusionDirectory Plugins Applications

Description

The application plugin is used to add the definition of web and desktop applications. The web applications can be used on a roles or used to make a portal where users can click on icons. The Desktop applications can be used with deployment systems to create desktop entries

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-applications
yaourt -S fusiondirectory-plugin-applications-schema
```


Debian

```
apt-get install fusiondirectory-plugin-applications
apt-get install fusiondirectory-plugin-applications-schema
```

RHEL

```
yum install fusiondirectory-plugin-applications
yum install fusiondirectory-plugin-applications-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd-
↪ conf.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd-
↪ conf.schema
```

RHEL

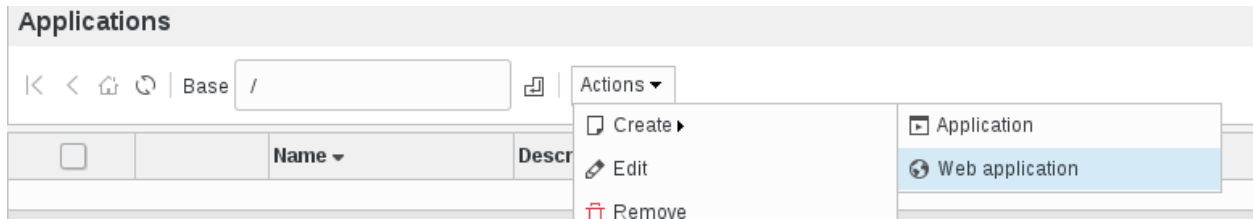
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/applications-fd-
↪ conf.schema
```

Configuration

No configuration needed for this plugin.

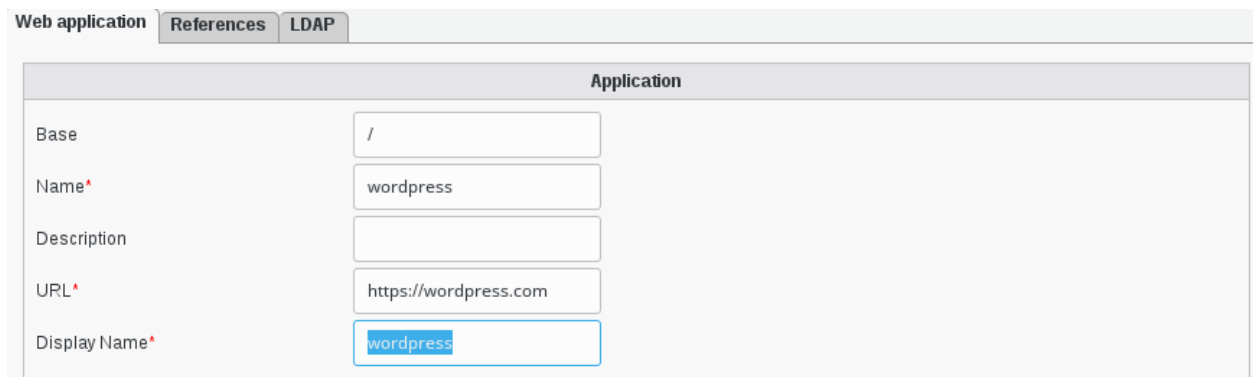
Functionalities

Add a web application

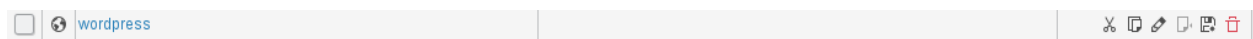


A new dialog box will open, fill the forms and save your application :

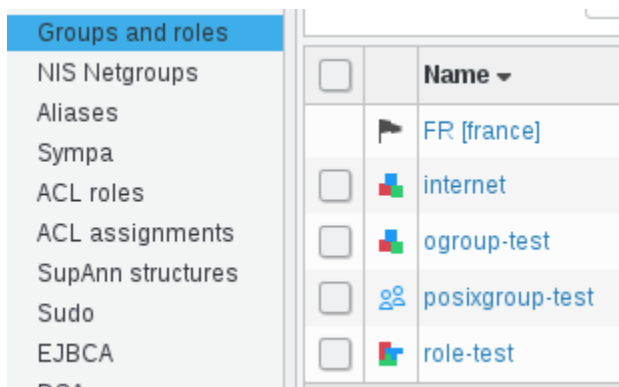
- Base: where is the application entry in the LDAP
- Name: applications name
- Description: description of the application
- URL: URL of the application
- Display Name: the name that we display (FusionDirectory portal)
- Set your icon for you application (FusionDirectory portal)



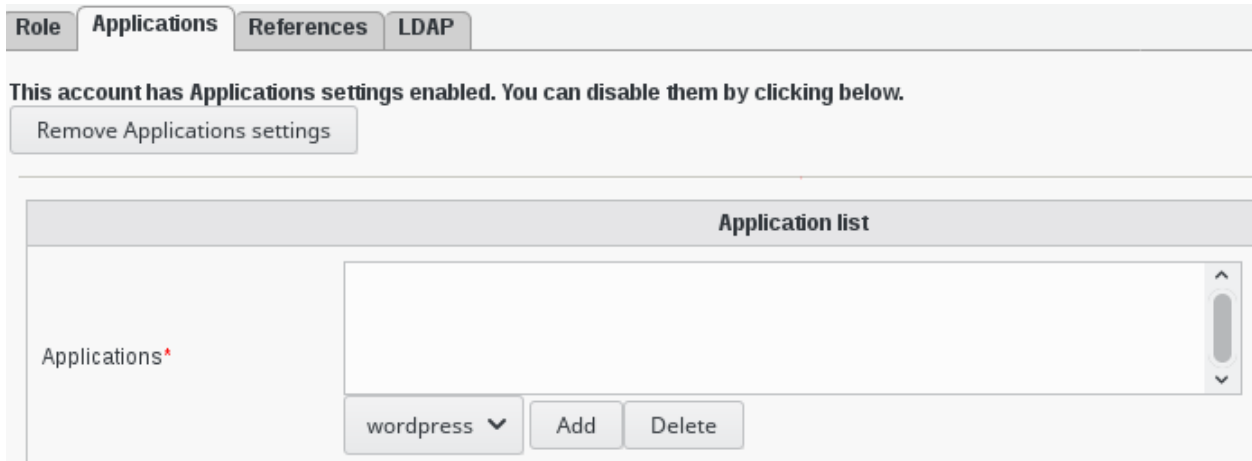
Click “ok”, and you will see the wordpress line created in the application



Now, if you click on the menu entry “Groups and roles” on the left, you will find a “role-test” group

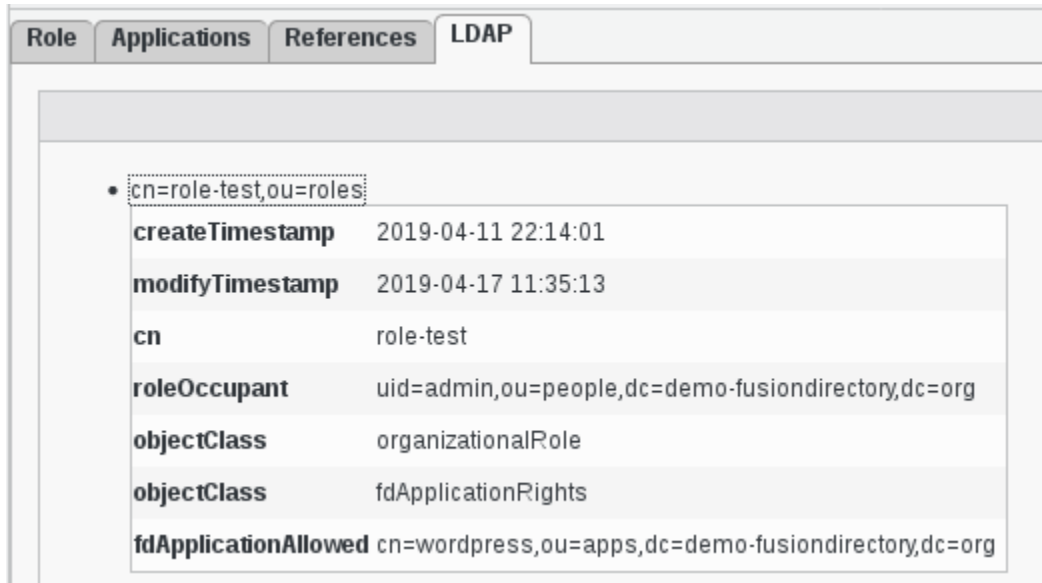


If you click on the role-test group, you will see the Applications tab



Click on the entry that you created before and click “add”, and you will see your webapplication added

Now go to LDAP tab and click on the entry you see



This will give you an overview of attributes **fdApplicationAllowed** that you will be able to use in a filter to restrict who can login

Use FusionDirectory as portal

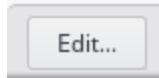
- Activate portal mode

Go in configuration



Click on plugins section and then click edit in the bottom right corner





Select your portal mode in the “Show web applications in menu” drop-down menu

Applications	
Application RDN*	<input type="text" value="ou=apps"/>
Web applications RDN*	<input type="text" value="ou=apps"/>
Show web applications in menu*	<input type="button" value="None"/> ▼

- None: no use portal mode
- Only allowed: only allow user that are in a role that have your application
- All: the icons are displayed for everyone

1.9.3 Audit

FusionDirectory Plugins Audit

Description

This plugin is used to audit all the operation done from FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-audit
yaourt -S fusiondirectory-plugin-audit-schema
```

Debian

```
apt-get install fusiondirectory-plugin-audit
apt-get install fusiondirectory-plugin-audit-schema
```

RHEL

```
yum install fusiondirectory-plugin-audit
yum install fusiondirectory-plugin-audit-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd.schema  
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd-conf.schema
```

Debian

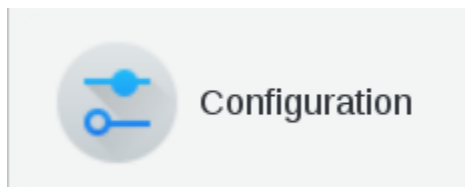
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd.schema  
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd-conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd.schema  
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/audit-fd-conf.schema
```

Configuration

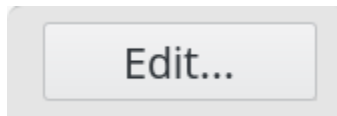
Click on Configuration icon on FusionDirectory main page



Click on Plugins tab



Click on Edit button otom right



Go to Audit section to configure

Audit

Audit RDN*

Actions to audit*

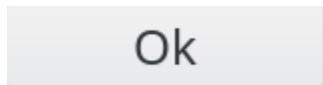
create
 modify
 remove
 security

Days to keep*

Fill the following fields :

- **Audit RDN** : branch in which audit events will be stored (required)
- **Actions to audit** : choose which actions should be stored in LDAP audit log (required)
- **Days to keep** : number of days of audit to keep in the LDAP when cleaning (required)

When you are done, click on OK button bottom right to save your settings



Functionalities

- Audit list

Audit


Actions ▼

	Time ▲	Author	IP	Action	Type	Target
	2020-04-27, 11:29:26	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	109.136.14.185	modify	plugin/user	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org
	2020-04-27, 11:28:09	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	109.136.14.185	security	login	admin
	2					


- Create a filter

Filter

Types

 Audit event

Date

Newer than 

Older than

Action

modify

create

remove




copy

snapshot

security


error

• Audit filter result

	Time ▲	Author	IP	Action	Type	Target	
	2020-04-27, 11:29:26	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	109.136.14.185	modify	plugin/user	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	<p>Date</p> <p>Newer than <input type="text" value="04 / 27 / 2020"/> </p> <p>Older than <input type="text" value="mm / dd / yyyy"/></p>
	2020-04-27, 11:28:09	uid=admin,ou=people,dc=demo-fusiondirectory,dc=org	109.136.14.185	security	login	admin	

• Audit event

Événement d'audit **Références** LDAP

Event	
Time*	2019-04-15, 13:21:48
Action*	modify
Author*	 dufour paul
Object type*	plugin/configInLdap
Object*	cn=config,ou=fusiondirectory,dc=demo-fusiondirectory,dc=org
Attributes	fdLanguage, fdTimezone
Result	Success

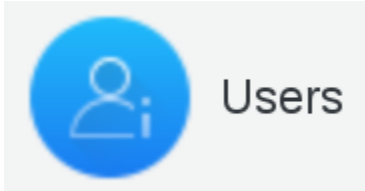
If you click on the author icon, you will get the author information

- Audit author

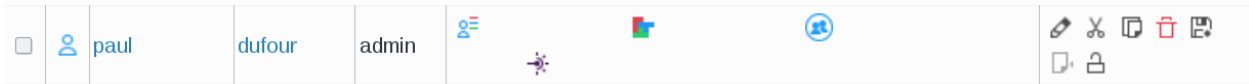
The screenshot shows a web interface for editing a user profile. It is divided into two main sections: 'Personal information' and 'Organizational contact information'. The 'Personal information' section includes fields for 'Last name' (paul), 'First name' (dufour), 'Description', and 'Picture'. The 'Organizational contact information' section includes fields for 'Location', 'State', 'Address', 'Room No.', and 'Phone'.

- Security Audit

Click on Users icon on FusionDirectory main page



Click on the user you want show the security audit data



Go to Security tab



You will now see the Security audit data for this user

Event	Author	Origin	Time	Result
Sign in	dufour paul	109.136.14.185	33 minute(s) ago	Logged in successfully

In this example, you can say that User dufour paul (**Author**) has signed-in (**Event**) and successfully logged-in (**Result**) from IP address 109.136.14.185 (**Origin**) 33 minutes ago (**Time**)

1.9.4 Autofs

FusionDirectory Plugins Supann

Description

The Autofs plugin is used to manage autofs through an LDAP directory.

Autofs is a program for automatically mounting directories on an as-needed basis.

Auto-mounts are mounted only as they are accessed, and are unmounted after a period of inactivity.

Because of this, automounting NFS/Samba shares conserves bandwidth and offers better overall performance compared to static mounts via fstab.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-autofs
yaourt -S fusiondirectory-plugin-autofs-schema
```

Debian

```
apt-get install fusiondirectory-plugin-autofs
apt-get install fusiondirectory-plugin-autofs-schema
```

RHEL

```
yum install fusiondirectory-plugin-autofs
yum install fusiondirectory-plugin-autofs-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/autofs-fd-conf.
↪ schema
```

Debian

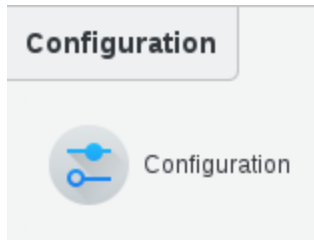
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/autofs-fd-conf.
↪ schema
```

RHEL

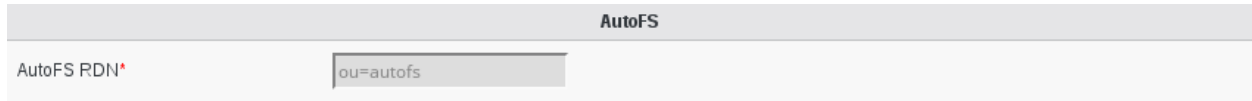
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/autofs-fd-conf.
↪ schema
```

Configuration

If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:

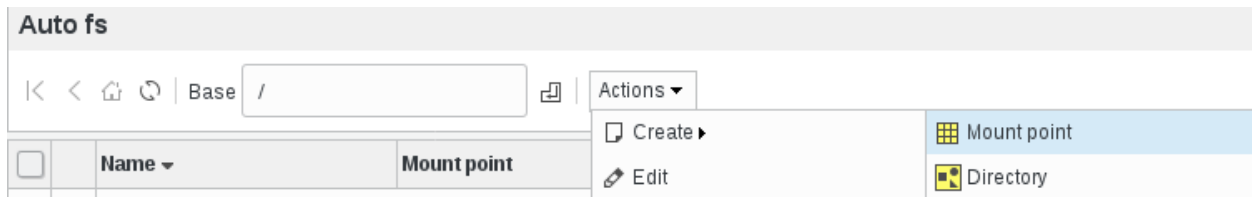


Access to configuration is read-only. If you need to make changes, then you must press the ‘Edit’ button at the bottom right of the window.

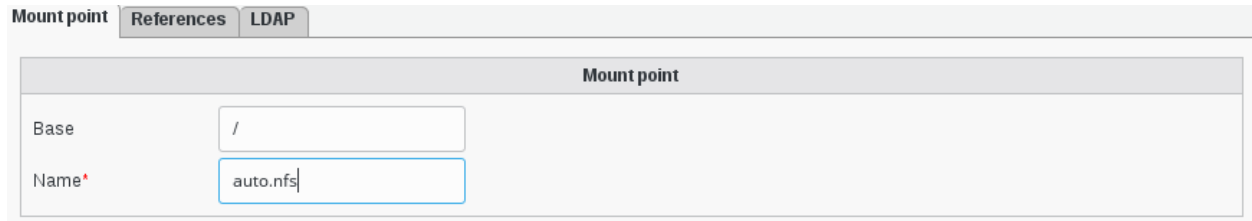


Functionalities

In your FusionDirectory web interface you have now, in the “Administration” section, a new tab and a new icon called “Autofs” that you can use to manage auto-mounts in your infrastructure :

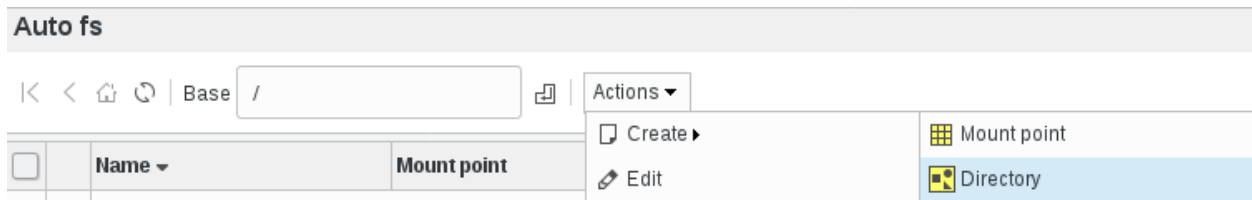


- Create Mount Point



Fill the different informations and click on ok to save it.

- Create a directory



Directory **References** LDAP

Directory

Base

Name*

Automount entry*

Mount point*

Fill the different informations and click on ok to save it.



1.9.5 Certificates

FusionDirectory Plugins Supann

Description

The Certificates plugin is used to to store private certificates in pem format.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-certificates
```

Debian

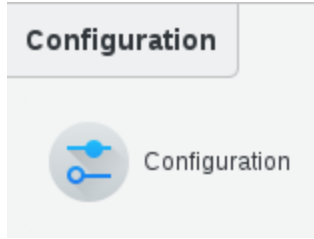
```
apt-get install fusiondirectory-plugin-certificates
```

RHEL

```
yum install fusiondirectory-plugin-certificates
```

Configuration

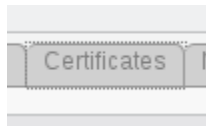
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



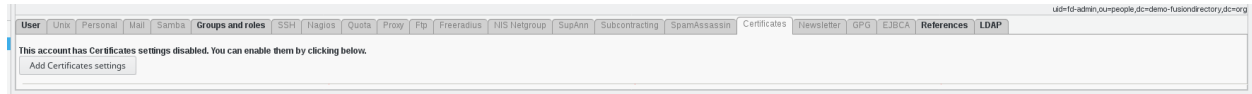
Functionalities

- Add a certificate

Select an user and click on certificate tab

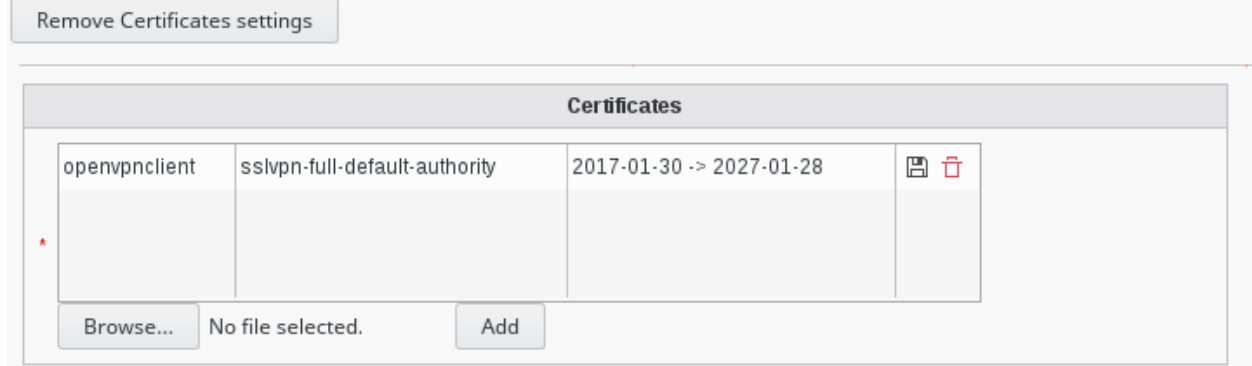


- Activate certificate tab



- Add a browsable crt or pem certificate

This account has Certificates settings enabled. You can disable them by clicking below.



1.9.6 Community

FusionDirectory Plugins Community

Description

The Community plugin is used to manage user communities in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-community  
yaourt -S fusiondirectory-plugin-community-schema
```

Debian

```
apt-get install fusiondirectory-plugin-community  
apt-get install fusiondirectory-plugin-community-schema
```

RHEL

```
yum install fusiondirectory-plugin-community  
yum install fusiondirectory-plugin-community-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/community-fd.  
↪ schema  
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/community-fd-  
↪ conf.schema
```

Debian

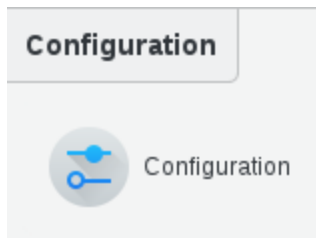
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/community-fd.schema  
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/community-fd-conf.  
↪ schema
```

RHEL

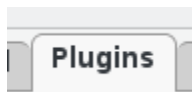
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/community-fd.  
↪ schema  
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/community-fd-  
↪ conf.schema
```

Configuration

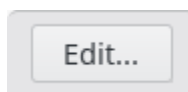
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



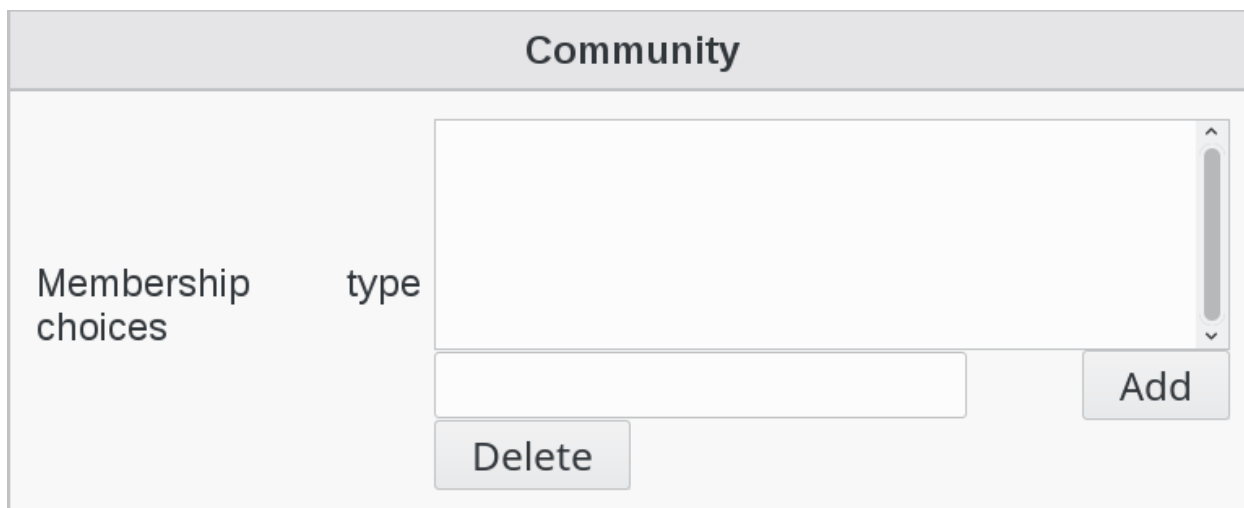
Go to Plugins tab



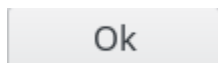
Click on Edit button bottom right



Fill-in Community options



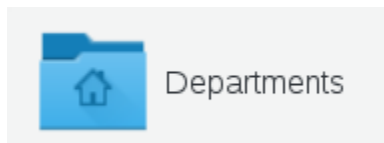
Click on OK button bottom right to save your options



Functionalities

- Create a department

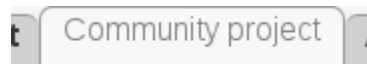
Click on Departments icon in FusionDirectory



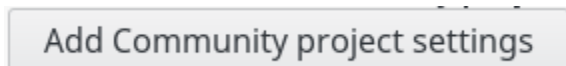
Click on Actions -> Create -> Department



Go to Community Project tab



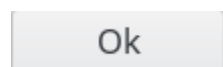
Click on Add Community projects settings



Fill-in all required fields

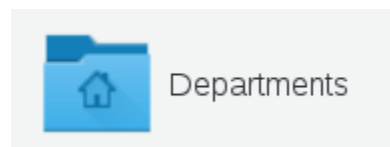
A screenshot of a dialog box for adding community project settings. It contains three sections: 'Project', 'Dates', and 'Contact'. The 'Project' section has fields for 'Project full name' and 'Project key'. The 'Dates' section has fields for 'Start date*' (with the value '14.06.2019') and 'End date'. The 'Contact' section has fields for 'First name', 'Last name', 'Address', 'City', 'State', and 'Country'. 'Ok' and 'Cancel' buttons are at the bottom right.

Click on OK button bottom right to save settings

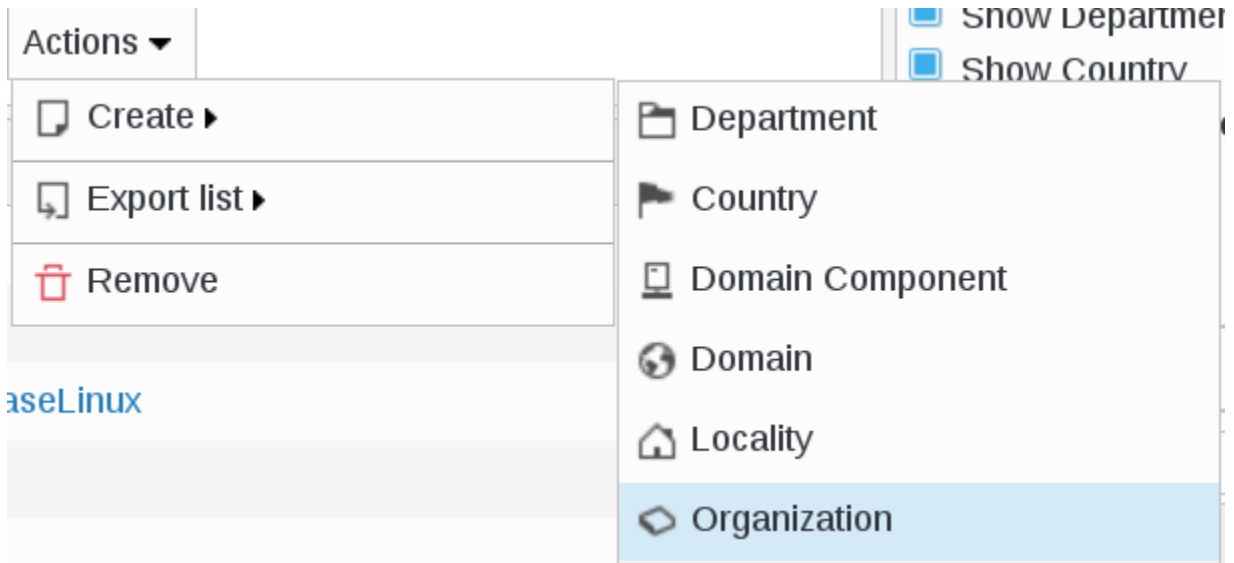


- Create an organization

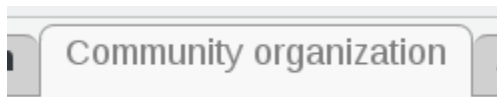
Click on Departments icon in FusionDirectory



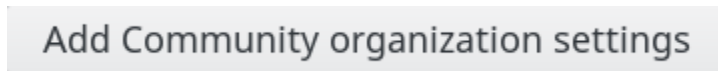
Click on Actions -> Create -> Organization



Click on Community organization tab



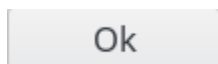
Click on Add Community organization settings



Fill-in all required fields

Membership		Dates	
Membership type	<input type="text" value="v"/>	Start date*	<input type="text" value="14.06.2019"/>
Agreement signed	<input type="checkbox"/>	End date	<input type="text"/>
Active	<input type="checkbox"/>		
Hidden	<input type="checkbox"/>		
Contact			
First name	<input type="text"/>		
Last name	<input type="text"/>		
Address	<input type="text"/>		
City	<input type="text"/>		
State	<input type="text"/>		
Country	<input type="text"/>		

Click on OK button bottom right to save settings



1.9.7 Cyrus

FusionDirectory Plugins Cyrus

Description

This plugin is used to manage Cyrus mailboxes with FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-cyrus
yaourt -S fusiondirectory-plugin-cyrus-schema
```

Debian

```
apt-get install fusiondirectory-plugin-cyrus
apt-get install fusiondirectory-plugin-cyrus-schema
```

RHEL

```
yum install fusiondirectory-plugin-cyrus
yum install fusiondirectory-plugin-cyrus-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/cyrus-fd.schema
```

Debian

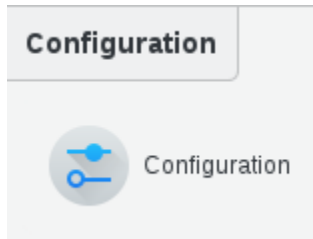
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/cyrus-fd.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/cyrus-fd.schema
```

Configuration

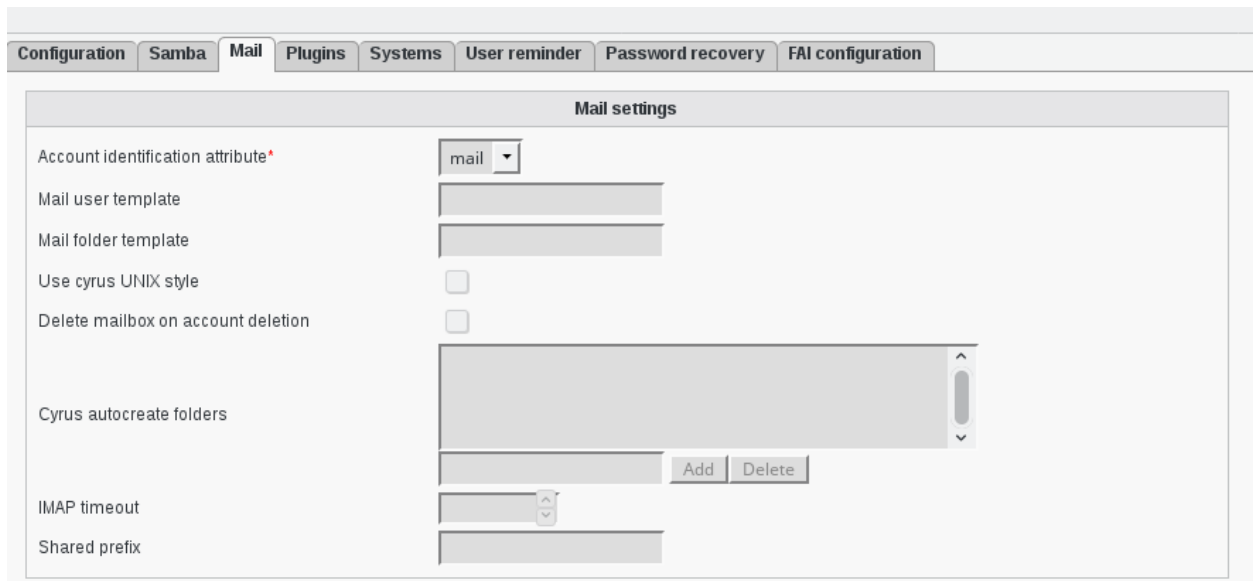
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



- Cyrus mail configuration

Access to configuration is read-only. If you need to make changes, then you must press the 'Edit' button at the bottom right of the window.

In Mail tab you will find the configuration of the cyrus plugin.



Mail settings

- Account identification attribute: (required) Determines which attribute FusionDirectory will use to create accounts. Valid values are mail and uid.
- Mail user template: Allows to override the user account creation syntax. See the 'Mail folder template' description for more details.

Examples:

```
%prefix%%uid% => user.foobar
```

```
my-prefix.%uid%%domain% => my-prefix.foobar@example.com
```

- Mail folder template: Allows to override the methods default account creation syntax.

Examples:

```
%prefix%%cn% => shared.development
```

```
my-prefix.%cn%%domain% => my-prefix.development@example.com
```

- Placeholders for the Mail folder template usage:

```
%prefix% The methods default prefix. (Depends on 'Use cyrus UNIX style')
```

```
%cn% The groups/users cn.
```

```
%uid% The users uid.
```

```
%mail% The objects mail attribute.
```

```
%domain% The domain part of the objects mail attribute.
```

```
%mailpart% The user address part of the mail address.
```

```
%uattrib% Depends on mailAttribute (uid/mail).
```

- Use cyrus UNIX style: Determines if FusionDirectory should use “foo/bar” instead of “foo.bar” namespaces in IMAP. Unix style is with slashes.

To use this option, you must set ‘unixhierarchysep’ parameter to ‘yes’ in your imap.conf configuration file.

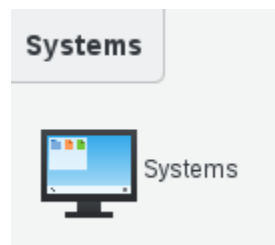
```
unixhierarchysep: yes
```

- Delete mailbox on account deletion: Determines if FusionDirectory should remove the mailbox from your IMAP server or keep it after the account is deleted in LDAP.
- Cyrus autcreate folders: Contains a comma separated list of personal IMAP folders that should be created along initial account creation.
- IMAP timeout: Sets the connection timeout for imap actions. Default value is 10 seconds.
- Shared prefix: Defines the prefix to add for mail shared folders.

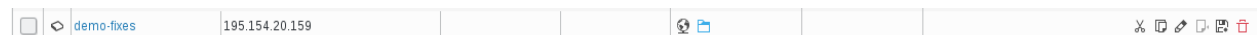
Functionalities

- Add Cyrus service

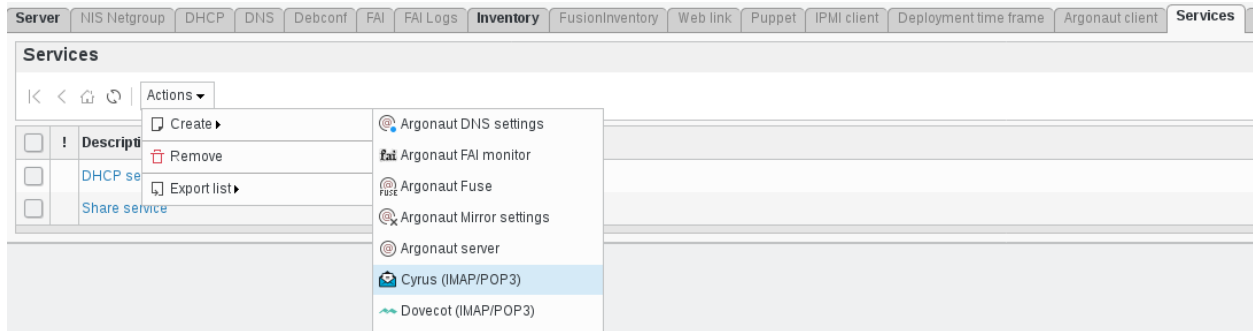
Click on the System button located in the System section of FusionDirectory main page



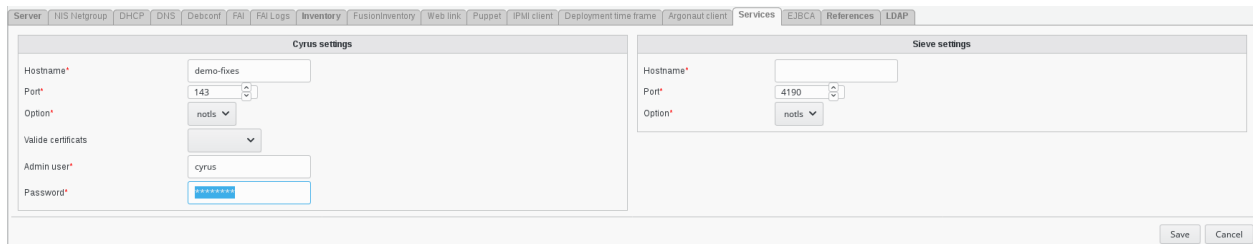
Click on the server you wish to configure cyrus service, in this exemple we assume that the server name is ‘demo-fixes’



Click on 'Services' tab and click on 'action - create - cyrus IMAP/POP3':



Fill in required fields then click 'Save':



Cyrus settings

- Hostname: Hostname of the Cyrus server.
- Port: Port number on which Cyrus server should be contacted.
- Option: (required) Options for contacting Cyrus server. Valid values are notls, tls and ssl.
- Validate certificates: Whether or not to validate server certificate on connexion. Valid values are validate and no-validate.
- Admin user: (required) Imap server admin user.
- Password: (required) Admin user password.

Sieve settings

- Hostname: Hostname of the Cyrus Sieve server.
- Port: Port number on which Cyrus Sieve server should be contacted.
- Option: (required) Options for contacting Cyrus Sieve server. Valid values are notls, tls and ssl.

Click on 'save'

Now, in services column, you can see the cyrus icon:



From now you can create User Mailbox

1.9.8 Developers

FusionDirectory Plugins Developers

Description

The Developers plugin gives information for developers in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-developers
```

Debian

```
apt-get install fusiondirectory-plugin-developers
```

RHEL

```
yum install fusiondirectory-plugin-developers
```

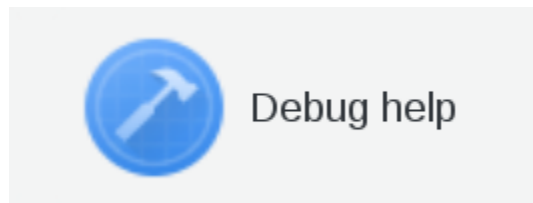
Configuration

No configuration needed for this plugin.

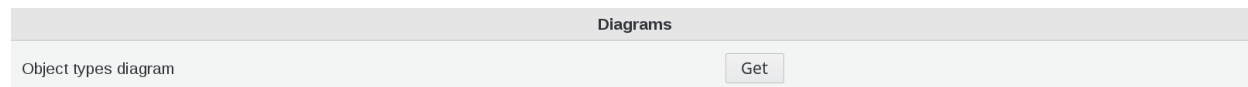
Functionalities

- Debug help

In the Reporting section in FusionDirectory, click on Debug help icon



You can download a diagram and see the content of all object types



Object Types

- Dashboard
- FusionDirectory configuration
- Group
- Debug help
- GPG server info
- Printer
- special
- OPSI import
- Inventory object
- OPSI ondemand list
- Organization
- OPSI software list
- POSIX group
- OPSI profile
- Public form
- Phone
- SOGo resource
- Sudo role
- Sympa list alias
- Simple security object
- Terminal
- User
- Web application
- Workstation
- Repository distribution
- Repository section
- Role
- Samba Domain

- Server
- Locality
- Network device
- Audit event
- Build repository
- Country
- Domain Component
- Debconf profile
- Department
- DHCP configuration
- Argonaut task import
- ACL assignment
- ACL role
- Application
- Argonaut task
- Directory
- LDAP Manager
- FAI Profile
- FAI script
- FAI template
- FAI variable
- Temporary mail distribution
- Temporary mail redirection
- Mobile phone
- NIS Netgroup
- Mount point
- FAI partition table
- FAI package configuration
- DNS view
- DNS acl
- DNS zone
- FAI Package

- FAI script
- FAI template
- FAI variable
- Temporary mail distribution
- Temporary mail redirection
- Mobile phone
- NIS Netgroup
- Mount point
- FAI partition table
- FAI package configuration
- DNS view
- DNS acl
- DNS zone
- FAI Package
- Domain
- EJBCA certificate
- SupAnn Entity
- SupAnn Establishment
- FAI hook

When you click on an object type, in this example FusionDirectory configuration, you can see the content of this object

• FusionDirectory configuration	
aclCategory	configuration
mainAttr	
ou	ou=fusiondirectory,
filter	(objectClass=fusionDirectoryConf)
tabClass	tabs_configInLdap
tabGroup	CONFIGURATIONTABS
mainTab	configInLdap
management	configInLdap
count	1

1.9.9 Dovecot

FusionDirectory Plugin Dovecot

Description

The Dovecot plugin allows to manage Dovecot mailbox in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-dovecot
yaourt -S fusiondirectory-plugin-dovecot-schema
```

Debian

```
apt-get install fusiondirectory-plugin-dovecot
apt-get install fusiondirectory-plugin-dovecot-schema
```

RHEL

```
yum install fusiondirectory-plugin-dovecot
yum install fusiondirectory-plugin-dovecot-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dovecot-fd.schema
```

Debian

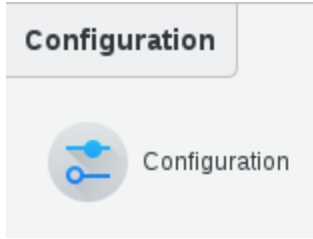
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dovecot-fd.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/dovecot-fd.
↪schema
```

Configuration

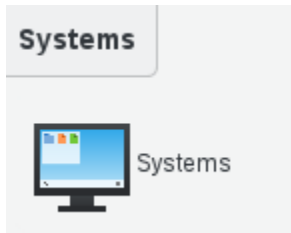
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



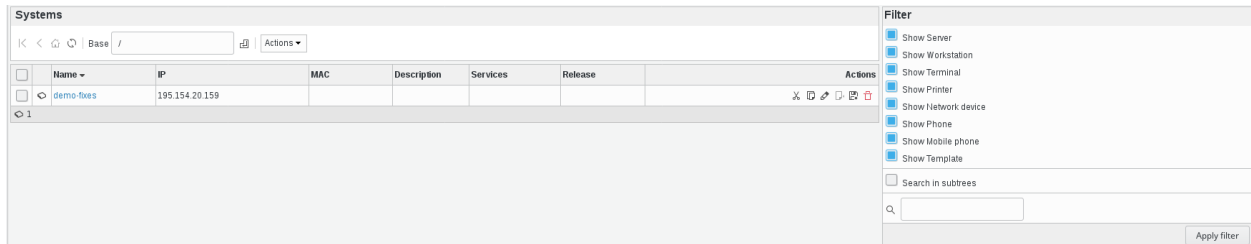
Functionalities

- Add Dovecot service

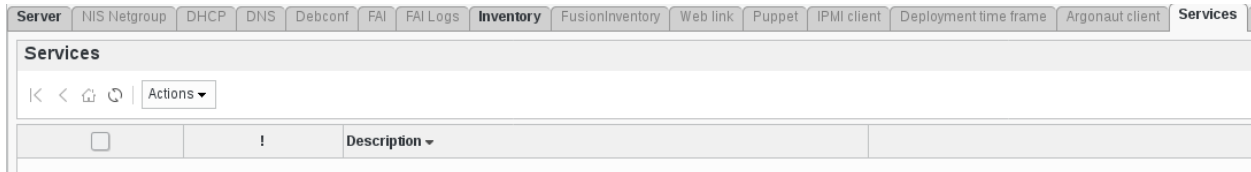
Go to Systems



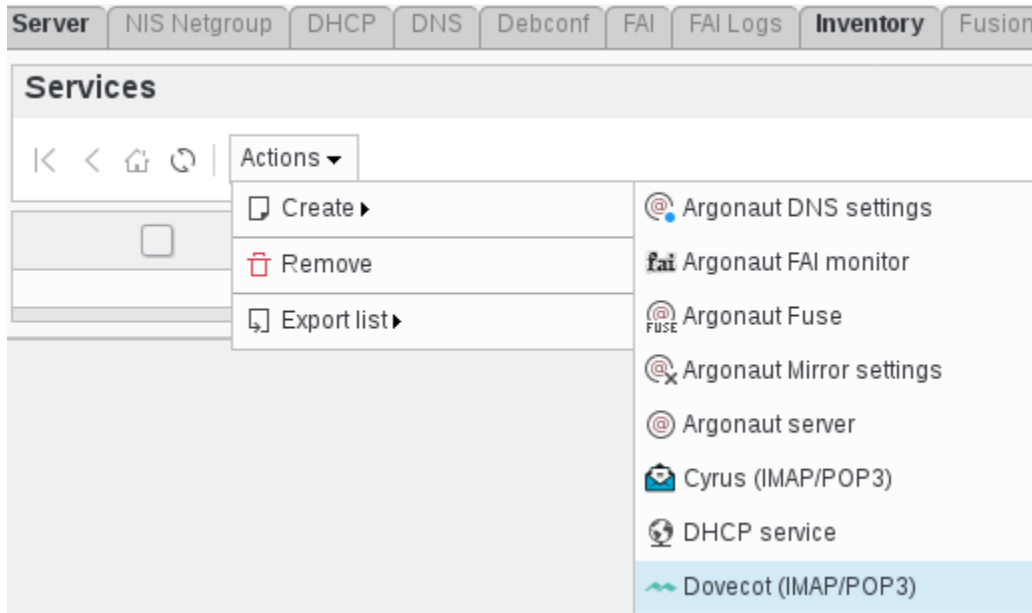
- Create your server or edit an server



Click on services tab



Add Dovecot service



Fill the fields for the Dovecot plugin and save it:

- Hostname: the hostname of the server
- Port: port for the connexion
- Option: tls or not
- Validate certificate: if we validate the certificate or not

Fill in Dovecot connections

The screenshot shows the 'Dovecot connection' configuration form in the FusionDirectory web interface. The form is titled 'Dovecot connection' and contains the following fields:

- Hostname***: A text input field.
- Port***: A numeric input field with the value '143' and up/down arrow controls.
- Option***: A dropdown menu with 'notls' selected.
- Validate TLS/SSL Certificates**: A dropdown menu.

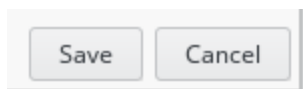
 Below the main form is an 'Options' section with a checkbox labeled 'Create the user folder via Argonaut*'.

Fill in Dovecot master credentials

The screenshot shows the 'Master credentials' configuration form in the FusionDirectory web interface. The form is titled 'Master credentials' and contains the following fields:

- Admin user***: A text input field.
- Password***: A text input field.
- Mail directory***: A text input field with the value '/var/mail'.

Click on ok to save your server



1.9.10 Dsa

FusionDirectory Plugins Dsa

Description

The dsa plugin is used to create Directory Service Accounts for administrative purpose (like pam_ldap, dns, nssldap, smbldap-tools, argonaut etc.) inside the LDAP directory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-dsa  
yaourt -S fusiondirectory-plugin-dsa-schema
```

Debian

```
apt-get install fusiondirectory-plugin-dsa  
apt-get install fusiondirectory-plugin-dsa-schema
```

RHEL

```
yum install fusiondirectory-plugin-dsa  
yum install fusiondirectory-plugin-dsa-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dsa-fd-conf.schema
```

Debian

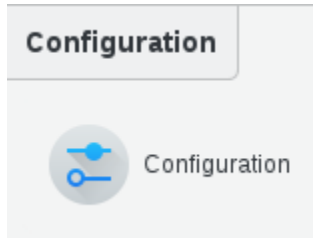
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dsa-fd-conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/dsa-fd-conf.schema
```

Configuration

If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



Access to configuration is read-only. If you need to make changes, then you must press the 'Edit' button at the bottom right of the window.

In Plugins tab you will find the block DSA, which is related to the configuration of the Dsa plugin

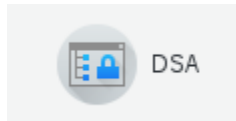
- DSA RDN: (required) Branch in which Directory Service Account (dsa) will be stored

DSA	
DSA RDN*	<input type="text" value="ou=dsa"/>

Functionalities

How use custom the DSA plugin

In your FusionDirectory Web interface, in the "Users and Groups" section, you will find an icon called "DSA" that you can use to manage service accounts in your ldap directory :

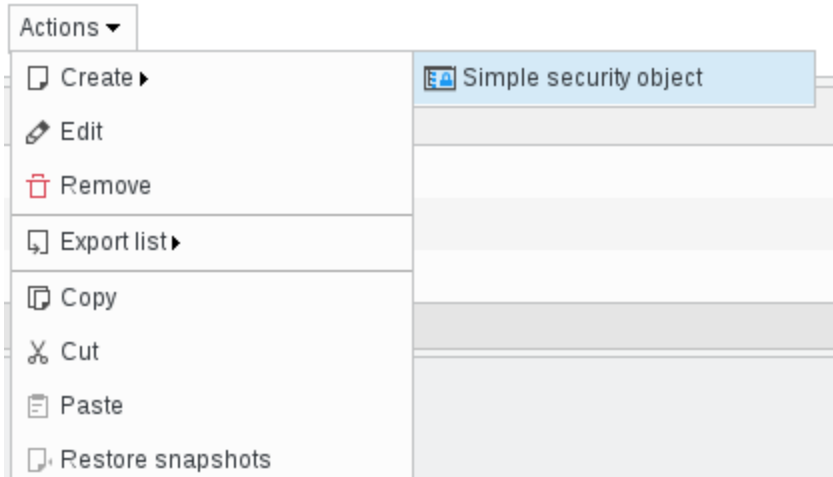


- Create a DSA account

Click on the 'DSA' entry or icon, in users and groups section, to join the 'DSA management' page.

DSA			
< < < < Base / <input type="text"/> Actions ▼			
<input type="checkbox"/>	Name ▼	Description	Actions
<input type="checkbox"/>	active [active]		
<input type="checkbox"/>	bar [test bar]		
<input type="checkbox"/>	fff [fff]		

Now you can add a new account (simple security object) via 'Actions -> Create' (or modify the existing ones):



A new dialog is open, fill at least in required fields:

- Base : object base
- Entry Name : (required) Service Account name

- Change password

Fill in the required fields :

- Password method: (required) Password hash method to use
- Password: (required) Service Account password
- Password again: (required) Same password as above, to avoid errors

1.9.11 EJBCA

FusionDirectory Plugins EJBCA

Description

The EJBCA plugin is used to read ssl certificates published by EJBCA into LDAP with FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ejbca  
yaourt -S fusiondirectory-plugin-ejbca-schema
```

Debian

```
apt-get install fusiondirectory-plugin-ejbca  
apt-get install fusiondirectory-plugin-ejbca-schema
```

RHEL

```
yum install fusiondirectory-plugin-ejbca  
yum install fusiondirectory-plugin-ejbca-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ejbca-fd*
```

Debian

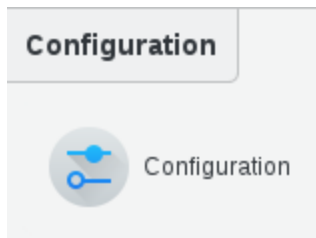
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ejbca-fd*
```

RHEL

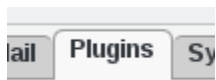
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ejbca-fd*
```

Configuration

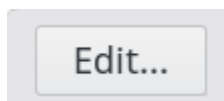
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



Go to Plugins tab



Click on Edit button bottom right



Fill-in EJBCA RDN

EJBCA plugin

EJBCA RDN*	<input style="width: 90%;" type="text" value="pu=certificates"/>
------------	--

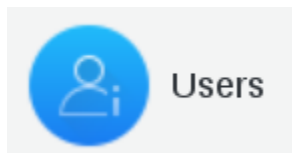
Click on OK button bottom right to save



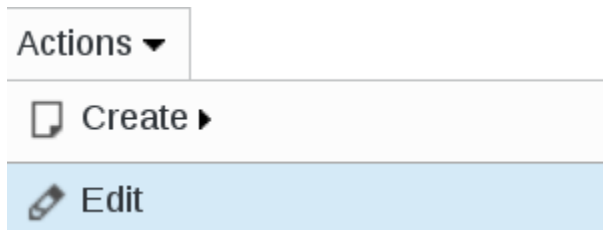
Functionalities

- Assign a certificate at a user

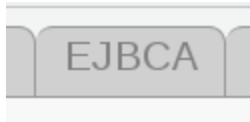
Click on Users icon in FusionDirectory



Click on Actions -> Edit



Activate EJBCA tab



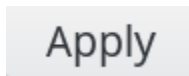
Click on EJBCA settings button



Select a certificate from the list

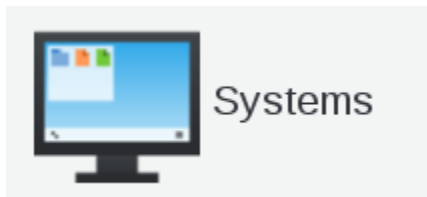


Click on Apply button bottom right to save

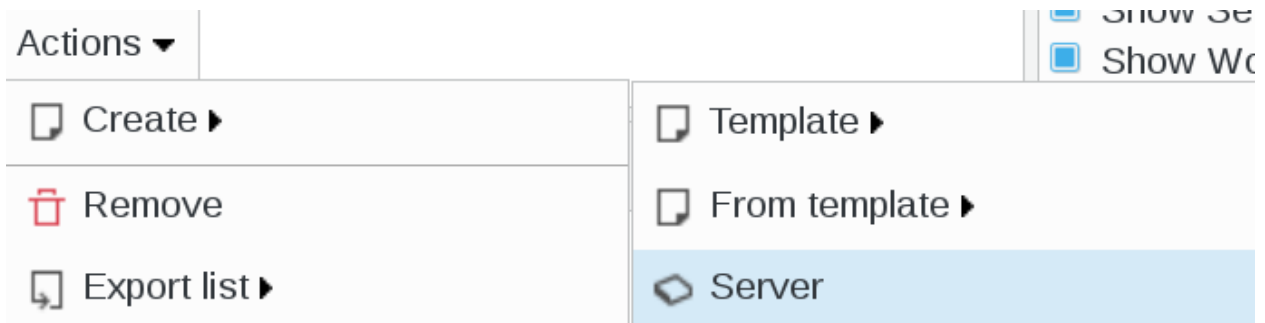


- Assign a certificate at a system

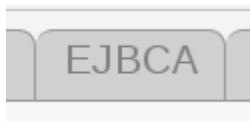
Click on Systems icon in FusionDirectory



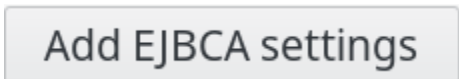
Click on Actions -> Create -> Server



Activate EJBCA tab



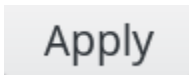
Click on EJBCA settings button



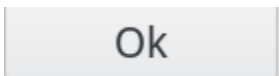
Select a certificate from the list



Click on Apply button bottom right to save



Click on OK button bottom right to save



- Add a certificate

Click on EJBCA icon in FusionDirectory



EJBCA part in FusionDirectory

EJBCA

Navigation: < < Home Refresh | Base / [input] | Actions ▾

<input type="checkbox"/>	Name ▾	Description	Actions
<input type="checkbox"/>	ama [ama]		
<input type="checkbox"/>	test [test]		

You can download your certificate here, but you may click on his name and see more info

1.9.12 GPG

FusionDirectory Plugins GPG

Description

The GPG plugin is used to store GPG keys in your directory through FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-gpg
yaourt -S fusiondirectory-plugin-gpg-schema
```

Debian

```
apt-get install fusiondirectory-plugin-gpg
apt-get install fusiondirectory-plugin-gpg-schema
```

RHEL

```
yum install fusiondirectory-plugin-gpg
yum install fusiondirectory-plugin-gpg-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/gpg-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/pgp*
```

Debian

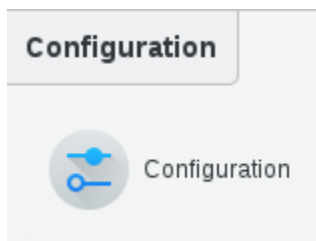
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/gpg-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/pgp*
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/gpg-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/pgp*
```

Configuration

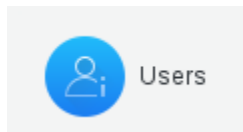
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



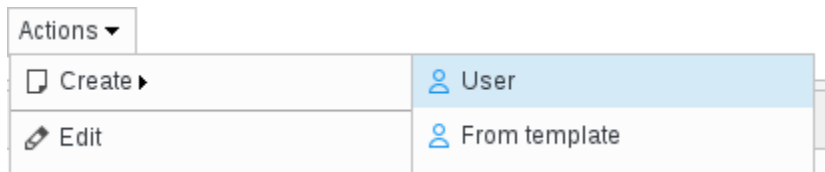
Functionalities

- Create a user

Click on "users" icon in FusionDirectory



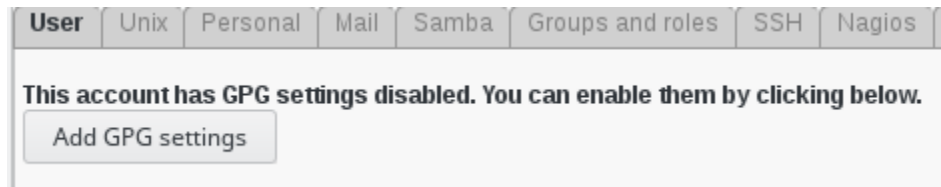
Click on Actions -> create -> user



Activate GPG tab



Click on Add GPG settings



Add a key that is in your LDAP

This account has GPG settings enabled. You can disable them by clicking below.

[Remove GPG settings](#)

GPG keys							
Key ID	User ID	Creation time	Expiration	Algorithm	Size	Revoked	Disabled

[Add](#)

Thick the key and save it

1.9.13 Ipam

FusionDirectory Plugins Supann

Description

The Ipam plugin is used to manage interface and network in a structured way in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ipam
yaourt -S fusiondirectory-plugin-ipam-fd.schema
```

Debian

```
apt-get install fusiondirectory-plugin-ipam
apt-get install fusiondirectory-plugin-ipam-fd.schema
```

RHEL

```
yum install fusiondirectory-plugin-ipam
yum install fusiondirectory-plugin-ipam-fd.schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ipam-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ipam-fd-conf.
↪ schema
```

Debian

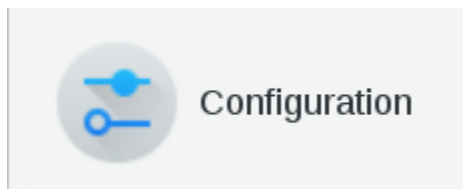
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ipam-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ipam-fd-conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ipam-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/ipam-fd-conf.
↪ schema
```

Configuration

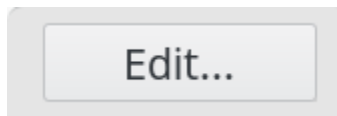
Click on Configuration icon in FusionDirectory main page



Click on Plugins tab



Click Edit button bottom right and go down to Ipam configuration menu



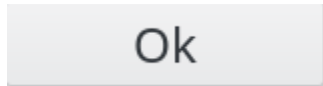
and go down to Ipam configuration menu

IPAM	
Subnet RDN*	<input type="text" value="ou=ipam"/>
VLAN RDN*	<input type="text" value="ou=ipam"/>

Fill-in the following fields :

- **Subnet RDN** : branch in which ipam subnets info will be stored (required)
- **VLAN RDN** : branch in which ipam vlan info will be stored (required)

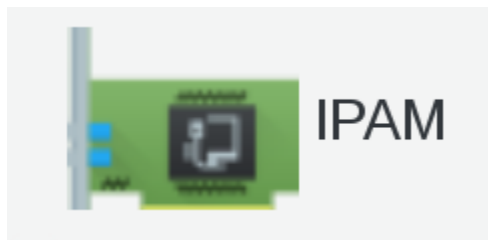
Click OK button bottom right to save your settings



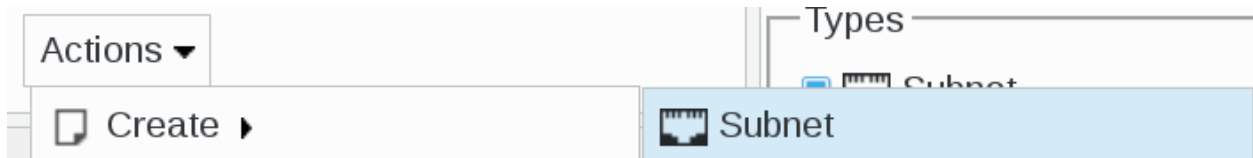
Functionalities

Create a subnet

Click on Ipam icon in FusionDirectory



On Ipam main page, click on Actions → Create → Subnet



This will bring you to subnet configuration page

A screenshot of the "Subnet" configuration page. It has tabs for "Subnet", "References", and "LDAP". The page is divided into two main sections: "General information" and "IP information".
General information:
Base: /
Name*:
Description:
Active*:
Organization:
Type:
Applicant:
Allocation date: 04 / 24 / 2020
Release date: mm / dd / yyyy
VLANs:
Add Delete
IP information:
IP:
Netmask:
Gateway:
Broadcast:
Ok Cancel

Fill-in the following fields :

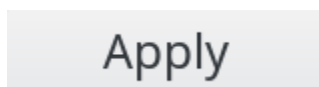
- **Base** : object base
- **Name** : subnet name (required)
- **Description** : description of this subnet
- **Active** : is the subnet active (required)
- **Organization** : organization who asked for the subnet
- **Type** : subnet type (lan, wan, wifi)
- **Applicant** : name of the person who asked for the subnet
- **Allocation date** : start allocation
- **Release date** : end allocation date
- **VLANs** : VLANs linked to this subnet
- **IP** : subnet IP
- **Netmask** : subnet netmask
- **Gateway** : gateway IP
- **Broadcast** : Broadcast IP

Note: You can attach multiple VLANs to a subnet.

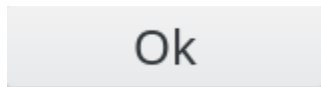
Example of Subnet

General information		IP information	
Base	/	IP	192.168.10.0
Name*	lan-192-168-10	Netmask	255.255.255.0
Description	lan interne 192.168.10	Gateway	192.168.10.1
Active*	<input checked="" type="checkbox"/>	Broadcast	
Organization	fusiondirectory		
Type	lan		
Applicant	bmortier		
Allocation date	04 / 24 / 2020		
Release date	mm / dd / yyyy		
VLANs	<input checked="" type="checkbox"/> vlan42		
	<input type="button" value="Add"/> <input type="button" value="Delete"/>		<input type="button" value="Ok"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>







When you are done, click on Apply button bottom right to save your subnet



Then, click on OK button. This will bring you back to Ipam main page

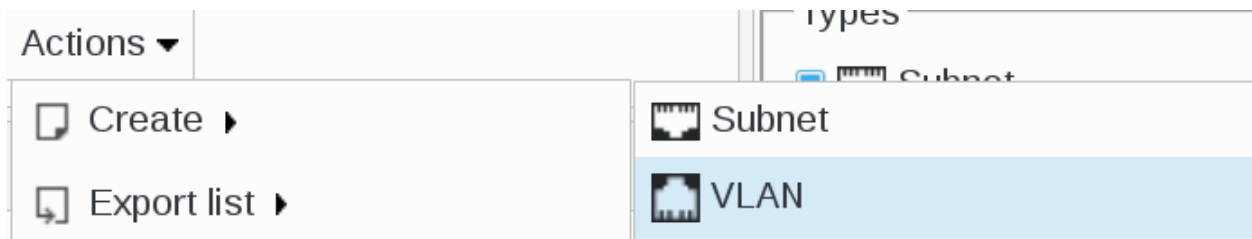


You can now see you just created subnet in the list

<input type="checkbox"/>	Name ▾	Description	Actions
<input type="checkbox"/>	 lan-192-168-10	lan interne 192.168.10	     

Create a VLAN

On Ipam main page, click on Actions → Create → VLAN



This will bring you to VLAN configuration page

VLAN References LDAP

General information


Base


Name*

Description

Active*

Organization

Inner ID* 

QinQ ID 

Applicant

Fill-in the following fields :

- **Base** : object base
- **Name** : subnet name (required)
- **Description** : description of this vlan
- **Active** : is this subnet active (required)
- **Organization** : organization who asked for the subnet
- **Inner ID** : inner VLAN ID (required)
- **QinQ ID** : QinQ ID VLAN ID

- **Applicant** : name of the person who asked for the subnet

Example of VLAN

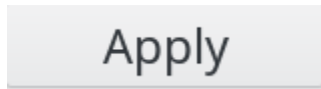
cn=vlan42,ou=ipam,dc=demo-fusiondirectory,dc=org

VLAN
References
LDAP

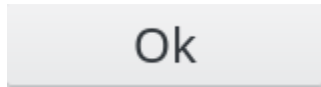
General information

Base	<input type="text" value="/"/>
Name*	<input type="text" value="vlan42"/>
Description	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
Active*	<input checked="" type="checkbox"/>
Organization	<input type="text" value="fusiondirectory"/>
Inner ID*	<input type="text" value="42"/>
QinQ ID	<input type="text"/>
Applicant	<input type="text" value="bmortier"/>

When you are done, click on Apply button bottom right to save your vlan



Then, click on OK button. This will bring you back to Ipam main page



You can now see you just created vlan in the list

		Name ▾	Description	Actions
<input type="checkbox"/>		lan-192-168-10	lan interne 192.168.10	

VLAN section when creating Systems

Note that when you create a system in *Systems* section, additional IPAM fiends will appear and need to be filled :

Server
Interfaces
NIS Netgroup
DHCP
DNS
FAI
Debconf
FAI Logs
Fusioninventory
Inventory
Services
Web link
Deployment time frame
Argonaut client
IPMI client
EJBCA
References
LDAP

Interface new

General information

Name*	<input type="text"/>
Mac address	<input type="text"/>
IP address	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="text"/> <input type="button" value="Add"/> <input type="button" value="Delete"/> </div>

IPAM

VLAN	<input type="text" value="None"/>
VLAN tag	<input type="text"/>
Subnet	<input type="text" value="None"/>
Add free IP from subnet	<input type="button" value="Add IP"/>

- **VLAN** : if you select a vlan, the network subnet will be restricted to the vlan contained in this subnet

- **VLAN tag** : VLAN tag
- **Subnet** : choose a subnet from the drop-down menu
- **Add free IP from subnet** : the ADD IP button allows you to automatically add a free ip in the subnet selected

1.9.14 Ipmi

FusionDirectory Plugins Ipmi

Description

This impm plugin is used to store the impm credentials to connect to the impm component inside your systems.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ipmi
yaourt -S fusiondirectory-plugin-ipmi-schema
```

Debian

```
apt-get install fusiondirectory-plugin-ipmi
apt-get install fusiondirectory-plugin-ipmi-schema
```

RHEL

```
yum install fusiondirectory-plugin-ipmi
yum install fusiondirectory-plugin-ipmi-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ipmi-fd.schema
```

Debian

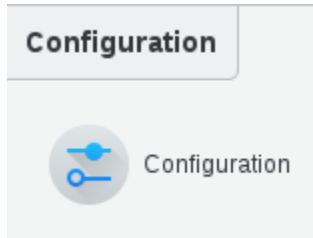
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ipmi-fd.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/ipmi-fd.schema
```

Configuration

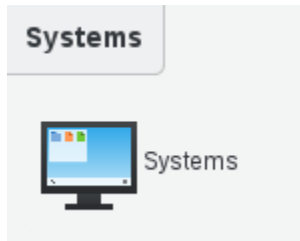
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



Functionalities

- How to add an Ipmi client

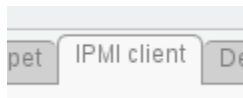
Go to Systems



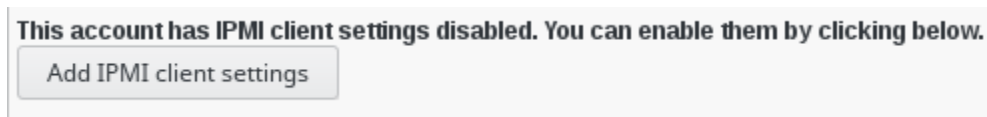
- Edit a server



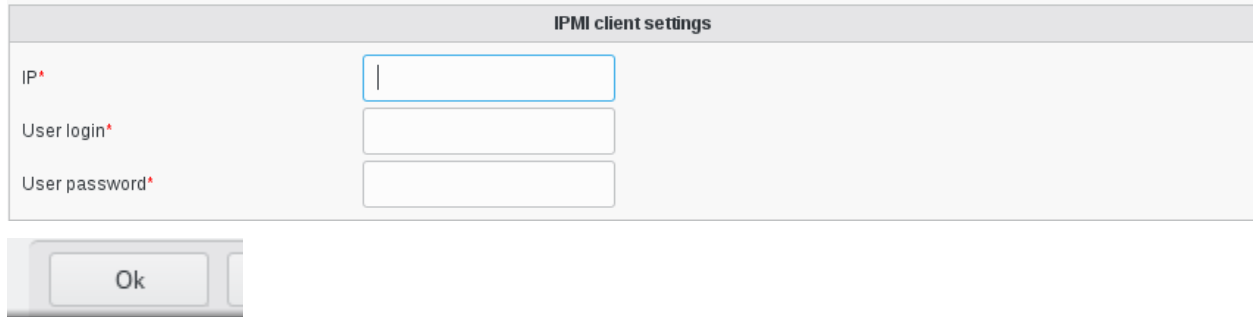
Click on Ipmi client tab



Click on Add Ipmi client settings button



Fill IP, user login and user password Click on ok to save it



IPMI client settings

IP*

User login*

User password*

Ok

1.9.15 Ldapdump

FusionDirectory Plugins Ldapdump

Description

The Ldapdump plugin gives all the information from an object that is stored in the LDAP.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ldapdump
```

Debian

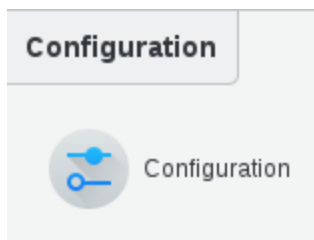
```
apt-get install fusiondirectory-plugin-ldapdump
```

RHEL

```
yum install fusiondirectory-plugin-ldapdump
```

Configuration

If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:

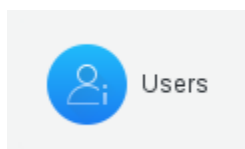


Functionalities

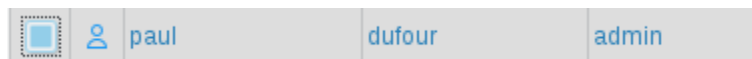
- How to use the LDAP Dump plugin

For example to see the ldapdump of a user object

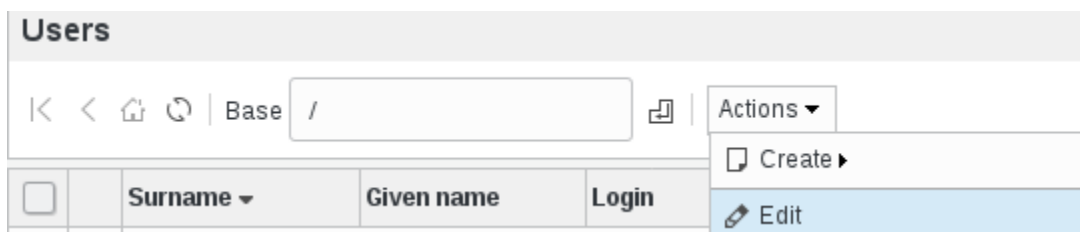
Click on Users icon in FusionDirectory



Select a user by thicking the little box



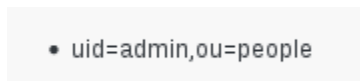
Click on Actions -> Edit



Go to LDAP tab at the bottom



In the LDAP tab, you can see the DN of your element



If you click on your element, you will see all the informations that the LDAP contains

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ldapmanager
```

Debian

```
apt-get install fusiondirectory-plugin-ldapmanager
```

RHEL

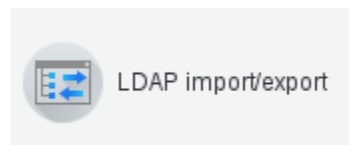
```
yum install fusiondirectory-plugin-ldapmanager
```

Configuration

There is no configuration for ldap manager

Functionalities

In your FusionDirectory web interface, you now have, in the Configuration section, a new item called “LDAP import/export” that you can use to manage ldif in your infrastructure :



When you click on this item, then you can:

- Export ldif
- Import ldif
- Import CSV

Export LDIF

The LDIF export plugin provides methods to download a complete snapshot of the running LDAP directory as ldif. You may save these files for backup purpose or when initializing a new server.

Export	
Export single entry	<input type="text"/> <input type="button" value="Export"/>
Filter	<input type="text" value="(objectClass=*)"/>
Export complete LDIF for	<input type="text" value="/"/> <input type="button" value="Export"/>

“Export single entry” allows you to export a single ldap record. For example, in my ldap directory, if I ask to export the sales group:

```
cn=sales,ou=groups,dc=fusiondirectory,dc=org
```

the result is an ldif file with this content:

```
dn: cn=sales,ou=groups,dc=fusiondirectory,dc=org
cn: sales
gidNumber: 1105
memberUid: Homer.Sympson
memberUid: gmarquez
objectClass: top
objectClass: posixGroup
```

“Export complete LDIF for” allows you to export all records of your ldap directory.

Import LDIF

The LDIF import plugin provides methods to upload a set of entries to your running LDAP directory as LDIF. You may use this to add new or modify existing entries. Remember that FusionDirectory will not check your ldifs for FusionDirectory conformance.

Import LDIF	
Overwrite existing entries	<input type="checkbox"/>
Import LDIF file	<input type="text"/>
	<input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload"/> <input type="button" value="Import"/>

Import LDIF File (Modify existing objects, keep untouched attributes)

For example, in FusionDirectory, I have this posixgroup-test group:

Group Mail Partage Samba Freeradius References LDAP

Properties

Base: /

Name*: posixgroup-test

Description:

Force GID:

GID: 1101

System trust

Trust mode: disabled

Add Delete

Group members

durieux Bcarole

Add Delete

which corresponds to this entry in my ldap directory:

```
dn: cn=posix-group,ou=groups,dc=fusiondirectory,dc=org
cn: posix-group
gidNumber: 1105
memberUid: durieux.Bcarole
objectClass: top
objectClass: posixGroup
```

CSV import

The CSV import plugin provides methods to generate objects (for instance user accounts) from a file containing Colon Separated Values. You can decide which columns should be transferred to which attribute and select a template to apply.

You can also add fixed values for fields which are missing from the CSV file for instance

LDIF CSV import

Import CSV

Object type*: User

Template*:

CSV file: No file selected.

Separator*: ,

Fixed values:

Add Delete

Import

Template filling

RHEL

```
yum install fusiondirectory-plugin-invitations
yum install fusiondirectory-plugin-invitations-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/invitations-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/invitations-fd-
↪ conf.schema
```

Debian

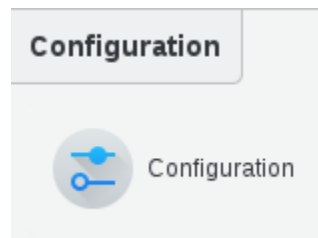
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/invitations-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/invitations-fd-conf.
↪ schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/invitations-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/invitations-fd-
↪ conf.schema
```

Configuration

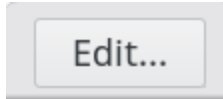
Click on Configuration icon on FusionDirectory main page



Go to Invitations tab



Click on Edit button bottom right



You are now able to configure Invitations parameters

LDAP	Emails
Invitations RDN* <input type="text" value="ou=invitations"/> Registrations RDN* <input type="text" value="ou=registrations"/>	Email expeditor* <input type="text" value="no-reply@example.com"/> Default email content* <input type="text" value="Hello, Please subscribe by going to"/>

LDAP configuration

- **Invitations RDN:** Defines the branch in which invitations objects will be stored
- **Registrations RDN:** Defines the branch in which registrations objects will be stored

Emails configuration

- **Email expeditor:** the e-mail address used to send invitations e-mails. Be careful to select an address that your server can send from without being flagged as spam (required)
- **Default email content:** Default content of e-mail sent invitations (required)

Functionalities

Invitation

You can create an invitation for any form you created from the Public Forms plugin.

Invitation References LDAP

Invitation	Emails
Base <input type="text" value="/"/> Name* <input type="text"/> Form* <input type="text" value="signup"/> <input type="button" value="v"/> Email subject* <input type="text"/> Email content* <input type="text" value="Hello! Please subscribe by going to https://example.com/invitation.php?token=%s"/> Author <input type="text" value="uid=fd-admin,ou=people,dc=ecolo,dc=lan"/>	Reply to <input type="text" value="fd-admin@example.com"/> Emails <input type="text"/> <input type="button" value="Parcourir..."/> <input type="text" value="Aucun fichier sélectionné."/> <input type="button" value="Upload"/>

Properties

- **Base:** The LDAP branch in which this invitation will be stored
- **Name:** A name to identify this invitation

- **Form:** The form to show for this invitation
- **Email subject:** The subject of the sent email
- **Email content:** The content of the sent email
- **Author:** Shows the author of this invitation

Sending invitations









To actually send invitation you need to fill the second section on the right.

- **Reply to:** This is the email address which will be put in the Reply-To header, it defaults to the email address of the connected user
- **Emails:** This contains the email recipient you want to send an invitation to, if any

Registrations

Sent

Once you invited some people, a registration object is created for each of them, which stores the state of his registration.










<input type="checkbox"/>	Email	User object	Status	Last change	Invitation	Actions
<input type="checkbox"/>	 john.smith@example.com		 Sent	2018-12-17 11:47:42 - by  System Administrator	invitation1	   
 1						

A registration contains a few informations:

- **Email:** The email address the invitation was sent to
- **User object:** A link to the user object once the registration is filled
- **Status:** The status of this registration, one of: Sent, Filled, Accepted, Rejected
- **Last change:** The date and time of the last modification and its author
- **Invitation:** A link to the invitation object

Filled

Once a invitation is used and the form is correctly filled:








<input type="checkbox"/>	Email	User object	Status	Last change	Invitation	Actions
<input type="checkbox"/>	 john.smith@example.com	 John Smith	 Filled	2018-12-17 11:53:59 - by  publicFormPage	invitation1	   
 1						

- A user object is created using the template.
- This user is locked and has the fdUserRegistration objectClass.
- This user is stored in the base indicated in the form object, under a similar tree as the one its invitation is stored at.
- The registration state is changed to Filled.

Then, a manager or administrator needs to accept or reject the registration.

Accepted

If the registration is accepted:

<input type="checkbox"/>	Email	User object	Status	Last change	Invitation	Actions
<input type="checkbox"/>	 john.smith@example.com	John Smith	✓ Accepted	2018-12-17 11:55:01 · by  System Administrator	invitation1	   
 1						

- The user object is unlocked.
- It's moved to the same base as its invitation.
- The objectClass fdUserRegistration is removed.
- The registration state is changed to Accepted.

Rejected

If the registration is rejected:

- The user object is deleted.
- The registration state is changed to rejected.

1.9.18 Mail

FusionDirectory Plugins Mail

FusionDirectory mail concept

- Mail methods

FusionDirectory supports different ways to manage your mail accounts, each type of mail account is represented by a so called mail method.

Every method implements a specific storage of mail accounts. The mail methods can also add functionalities specific for each kin of server we manage.

For now we support :

- The base method explained in the mail plugin you are reading
- *The Cyrus mail method*
- *Dovecot*
- *RENATER Partage*

The basic method just store the data that can be used by other service like postfix for example. The other method like cyrus, dovecot, renater-partage need the corresponding server

Description

The Mail plugin is used to manage basic mail attributes in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-mail
yaourt -S fusiondirectory-plugin-mail-schema
```

Debian

```
apt-get install fusiondirectory-plugin-mail
apt-get install fusiondirectory-plugin-mail-schema
```

RHEL

```
yum install fusiondirectory-plugin-mail
yum install fusiondirectory-plugin-mail-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/mail-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/mail-fd-conf.
↪ schema
```

Debian

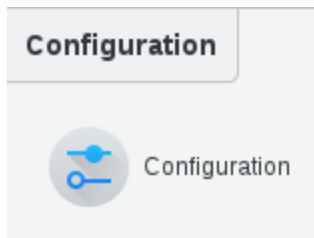
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/mail-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/mail-fd-conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/mail-fd.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/mail-fd-conf.
↪ schema
```

Configuration

If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



Access to configuration is read-only. If you need to make changes, then you must press the 'Edit' button at the bottom right of the window.

In Mail tab you will find the configuration of the plugin



Mail settings

Account attribute*	identification	<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">mail ▾</div>
Mail user template		<div style="border: 1px solid #ccc; height: 20px;"></div>
Mail folder template		<div style="border: 1px solid #ccc; height: 20px;"></div>
Use cyrus UNIX style		<input type="checkbox"/>
Delete mailbox on account deletion		<input type="checkbox"/>
Cyrus autcreate folders		<div style="border: 1px solid #ccc; height: 80px; position: relative;"> <div style="position: absolute; top: -10px; right: 0;">^</div> <div style="position: absolute; bottom: -10px; right: 0;">v</div> </div> <div style="border: 1px solid #ccc; padding: 2px; display: inline-block; margin-top: 5px;">Add</div>
		<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">Delete</div>
IMAP timeout		<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;">▾ ▹</div>
Shared prefix		<div style="border: 1px solid #ccc; height: 20px;"></div>

Mail settings

- Account attribute Identification : (required) Determines which attribute FusionDirectory will use to create accounts. Valid values are mail and uid
- Mail user template : Allows to override the user account creation syntax. See the 'Mail folder template' description for more details

Examples:

```
%prefix%%uid%      => user.foobar
```

```
my-prefix.%uid%%domain% => my-prefix.foobar@example.com
```

- Mail folder template : Allows to override the methods default account creation syntax

Examples:

```
%prefix%%cn%      => shared.development
```

```
my-prefix.%cn%%domain% => my-prefix.development@example.com
```

Placeholders

```
%prefix%      The methods default prefix. (Depends on 'Use cyrus UNIX style')
```

```
%cn%          The groups/users cn.
```

```
%uid%         The users uid.
```

```
%mail%        The objects mail attribute.
```

```
%domain%      The domain part of the objects mail attribute.
```

```
%mailpart%    The user address part of the mail address.
```

```
%uattrib%     Depends on mailAttribute (uid/mail).
```

- Use cyrus UNIX style : Determines if FusionDirectory should use “foo/bar” instead of “foo.bar” namespaces in IMAP. Unix style is with slashes. To use this option, you must set ‘unixhierarchysep’ parameter to ‘yes’ in your `imapd.conf` configuration file.
- Delete mailbox on account deletion : Determines if FusionDirectory should remove the mailbox from your IMAP server or keep it after the account is deleted in LDAP
- Cyrus autcreate folders : Contains a comma separated list of personal IMAP folders that should be created along initial account creation
- IMAP timeout : Sets the connection timeout for imap actions. Default value is 10 seconds
- Shared prefix: Defines the prefix to add for mail shared folders

Functionalities**Basic service provided**

- Services installed

From now, you have this new services available for every system server:

IMAP/POP3 generic service.

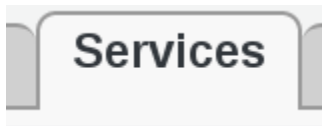
Click on Systems icon in FusionDirectory



Select a server (in this example demo-dev)

<input type="checkbox"/>	Name	IP	Mac	Description	Services	Release	Actions
<input type="checkbox"/>	demo-dev	195.154.20.159					

Go to Services tab



In the drop-down menu click on Actions -> Create -> IMAP/POP3 generic service

Actions ▾

- Create ▸
- Export list ▸

- Argonaut DNS settings
- Argonaut FAI monitor
- Argonaut Fuse
- Argonaut Mirror settings
- Argonaut server
- Cyrus (IMAP/POP3)
- DHCP service
- Dovecot (IMAP/POP3)
- IMAP/POP3 generic service

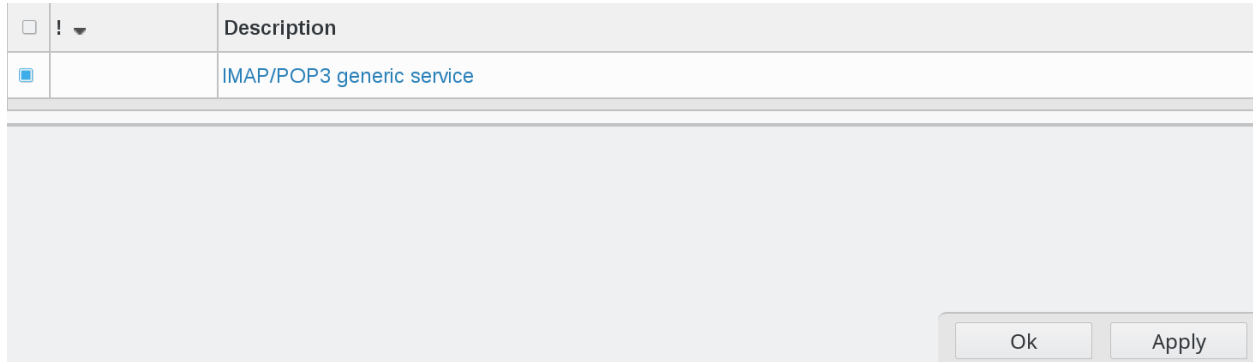
If you choose this service, a new dialog is opened

This server runs an IMAP or POP3 server

You just need to click on “Save” button bottom right



Click on Apply button



Now, in services column, you can see the imap/pop3 icon

<input type="checkbox"/>		Name	IP	Mac	Description	Services	Release	Actions
<input type="checkbox"/>		demo-dev	195.154.20.159					

1.9.19 Newsletter

FusionDirectory Plugins Newsletter

Description

The Newsletter plugin is used to tell to which newsletter a user has subscribed to in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-newsletter
yaourt -S fusiondirectory-plugin-newsletter-schema
```

Debian

```
apt-get install fusiondirectory-plugin-newsletter
apt-get install fusiondirectory-plugin-newsletter-schema
```

RHEL

```
yum install fusiondirectory-plugin-newsletter
yum install fusiondirectory-plugin-newsletter-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd-
↪ conf.schema
```

Debian

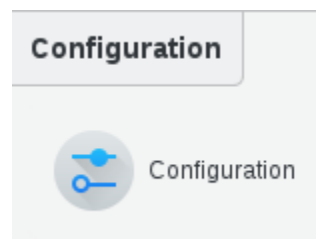
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd-
↪ conf.schema
```

RHEL

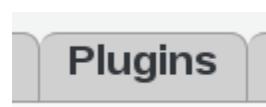
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/newsletter-fd-
↪ conf.schema
```

Configuration

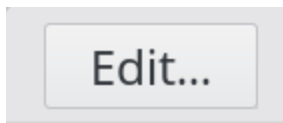
If you need to modify something, you can access to FD configuration of the plugin by the 'Configuration' icon or entry in the 'Addons' section of the main page of FusionDirectory Configuration Interface:



Go to Plugins tab



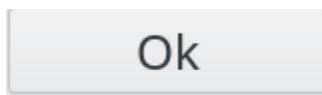
Click on Edit button bottom right



Go to Newsletter choices and fill-it as required



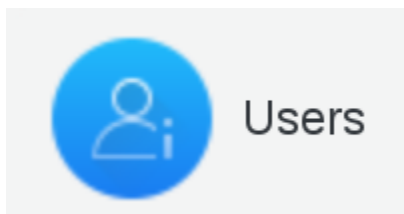
Click OK to save your settings



Functionalities

- Create Newsletter for a user

Click on Users icon in FusionDirectory



Select a user



Go to Newsletter tab



Click on Add Newsletter settings button

Add Newsletter settings

Fill-in Personal info

Personal info

Subscriptions

Click on Apply button bottom right to save your settings

Apply

1.9.20 NextCloud

FusionDirectory Plugins NextCloud

Description

The NextCloud plugin is used to define attributes for users that will be read by NextCloud to change some properties, like file quota or home folder.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-nextcloud
yaourt -S fusiondirectory-plugin-nextcloud-schema
```

Debian

```
apt-get install fusiondirectory-plugin-nextcloud
apt-get install fusiondirectory-plugin-nextcloud-schema
```

RHEL

```
yum install fusiondirectory-plugin-nextcloud
yum install fusiondirectory-plugin-nextcloud-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/nextcloud-fd.  
↪ schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/nextcloud-fd.  
↪ schema
```

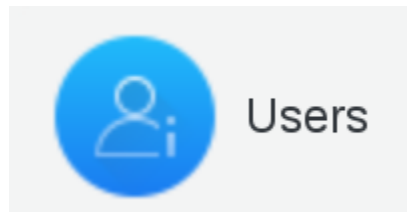
RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/nextcloud-fd.  
↪ schema
```

Functionalities

- Enable NextCloud account for a user

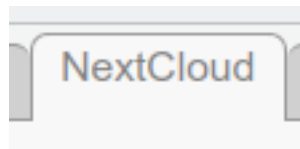
Click on Users icon in FusionDirectory



Select a user



Go to NextCloud tab



Click on Add NextCloud settings button



Fill-in NextCloud account

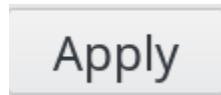
NextCloud account	
File quota	<input type="text" value="4500"/> <input type="button" value="↑"/> <input type="button" value="↓"/> <input type="button" value="MiB"/> <input type="button" value="v"/>
Home folder	<input type="text"/>

Available attributes:

- File quota: quota allowed for user in NextCloud
- Home folder: to override default NextCloud home folder

Tip: These attributes (`fdNextCloudQuota` and `fdNextCloudHomeFolder`) need then to be configured on NextCloud side, see [NextCloud administration manual](#).

Click on Apply button bottom right to save your settings



1.9.21 Personal

FusionDirectory Plugins Personal

Description

The personal plugin is used to store all kind of personal information that are not standardized in the core LDAP schemas.

It stores social accounts, nicknames, private email, start and end date of contract, if the photo should be visible in a white page applications etc...

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-personal
yaourt -S fusiondirectory-plugin-personal-schema
```

Debian

```
apt-get install fusiondirectory-plugin-personal
apt-get install fusiondirectory-plugin-personal-schema
```


RHEL

```
yum install fusiondirectory-plugin-personal
yum install fusiondirectory-plugin-personal-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd-conf.
↪ schema
```

Debian

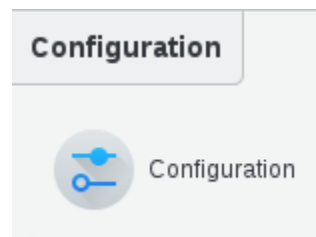
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd-conf.
↪ schema
```

RHEL

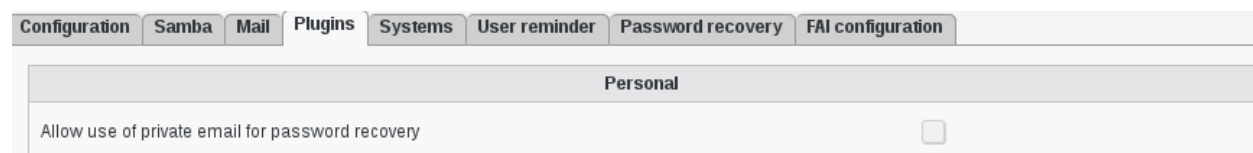
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/personal-fd-conf.
↪ schema
```

Configuration

If you need to modify something, you can access to FD configuration of the plugin by the ‘Configuration’ icon or entry in the ‘Addons’ section of the main page of FusionDirectory Configuration Interface:



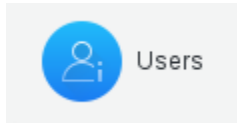
You can tick the “Allow use of private email for password recovery” option, so that the personal address can be used for password recovery: configuration -> plugins -> personal in FusionDirectory



Functionalities

- Edit a user

In FusionDirectory, click on users icon



This will bring you to the users overview

Users

Filter

- Show templates
- Show functional users
- Show POSIX users
- Show Mail users
- Show Samba users

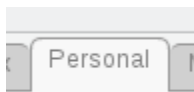
Base /
Actions ▾

<input type="checkbox"/>	Surname ▾	Given name	Login	Properties	Actions
<input type="checkbox"/>	active [active]				
<input type="checkbox"/>	bar [test bar]				
<input type="checkbox"/>	fff [ffff]				
<input type="checkbox"/>	Administrator	System	fd-admin		✂ 📄 ✎ 🔒 🗑 🔗
<input type="checkbox"/>	Bcarole	durieux	manager		✂ 📄 ✎ 🔒 🗑 🔗
<input type="checkbox"/>	paul	dufour	admin		✂ 📄 ✎ 🔒 🗑 🔗
<input type="checkbox"/>	peter	antoine	user		✂ 📄 ✎ 🔒 🗑 🔗

📁 3
👤 4

Apply filter

Click on a user and go to Personal tab



In this example, I selected peter antoine's profile

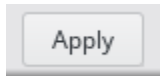


Activate the personal tab, fill it like you want and save it

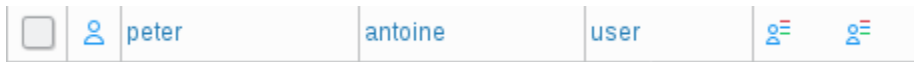
This account has Personal settings disabled. You can enable them by clicking below.

Add Personal settings

Click on “Apply” button bottom right



Now, if you go back to user list, you will see a new icon that defines that personal plugin is activated for your user



1.9.22 Public Forms

FusionDirectory Plugins Public Forms

Description

The Public Forms plugin is used to handle forms outside of FusionDirectory logged in pages which create objects inside FusionDirectory.

These forms maybe actually be private with a token system using the invitations plugin.

Or you may protect them using any other system.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-public-forms
yaourt -S fusiondirectory-plugin-public-forms-schema
```

Debian

```
apt-get install fusiondirectory-plugin-public-forms
apt-get install fusiondirectory-plugin-public-forms-schema
```

RHEL

```
yum install fusiondirectory-plugin-public-forms
yum install fusiondirectory-plugin-public-forms-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/public-forms-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/public-forms-fd-
↪ conf.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/public-forms-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/public-forms-fd-
↪ conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/public-forms-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/public-forms-fd-
↪ conf.schema
```

Configuration

Public forms	
Public forms RDN*	<input type="text" value="ou=forms"/>

Basic configuration

- **Public forms RDN:** Defines the branch in which form objects will be stored

Functionalities

You can manage forms in the «Public Forms» entry from the main menu.

Public Form

- **Base:** The LDAP base this form will be stored into
- **Name:** A name to identify this form
- **Title:** A title to display in this form page
- **Text:** A text to show before this form
- **Object type:** The type of object this form will create
- **Template:** The template to use for this form
- **Confirmation text:** The confirmation text shown once the form is successfully submitted
- **Private:** This is only useful if the *Invitations* plugin is installed and will make this form only available with a valid invitation
- **Creation base:** The base the created object will be placed in
- **TOS URL:** If filled, a mandatory checkbox will force people to accept the terms of service available at this URL before submitting the form

Altered fields

Field	Mandatory	Read only	Imported	Hidden
base	no	no	no	yes

Field Mandatory Read only Imported Hidden

The form will be built from the template, and all asked fields from the template will be shown by default.

In this tab you can alter how some of these fields behave, either by hiding them, or making them mandatory, or imported. Making them imported is only useful if you use a setup which fills HTTP headers with values for those fields. If a field is marked as read-only and mandatory but has no value it will be writable to avoid a lock out.

1.9.23 Pureftpd

FusionDirectory Plugins Pureftpd

Description

The Pureftpd plugin is used to manage pureftpd account inside the LDAP directory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-pureftpd
yaourt -S fusiondirectory-plugin-pureftpd-schema
```

Debian

```
apt-get install fusiondirectory-plugin-pureftpd
apt-get install fusiondirectory-plugin-pureftpd-schema
```

RHEL

```
yum install fusiondirectory-plugin-pureftpd
yum install fusiondirectory-plugin-pureftpd-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/pureftpd.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/pureftpd.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/pureftpd.schema
```

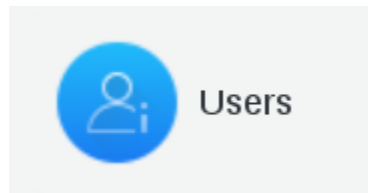
Configuration

No configuration needed for this plugin.

Functionalities

- Create Pureftpd User

In order to create a pureftpd user, you need to have a valid pureftpd server in your structure environment.



Click on existing user or create a new one



Click on “Ftp” tab



Click on “Add Ftp settings” button

Add Ftp settings

Fill the desired fields

Bandwidth	
Upload bandwidth (kb/sec)	<input type="text"/>
Download bandwidth (kb/sec)	<input type="text"/>

Bandwidth :

- Upload bandwidth (kb/sec) : Maximum upload bandwidth in Kb/sec
- Download bandwidth (kb/sec) : Maximum download bandwidth in Kb/sec

Ratio	
Uploaded files	<input type="text"/>
Downloaded files	<input type="text"/>

Ratio :

- Uploaded files : Defines upload ratio
- Downloaded files: Defines download ratio

Quota	
Files	<input type="text"/>
Size (MB)	<input type="text"/>

Quota :

- Files : restrict the maximum number of files of a user directory
- Size (MB) : restrict the maximum size, in MB, of a user directory

Miscellaneous	
Enable FTP access	<input type="checkbox"/>

Miscellaneous :

- Enable FTP access : thick the box if needed

Click on “Apply” button bottom right to save your settings

Apply

1.9.24 Renater Partage

FusionDirectory Plugins Renater Partage

Description

The RENATER Partage plugin manages the email component of the [Partage de RENATER](#) system, used by the research and education community in France.

To use it you need to be a Renater Partage partner and have a valid contract with a domain name and API key.

Installation

In order to install renater-partage plugin, you need to have installed and configured mail plugin.

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-renater-partage
yaourt -S fusiondirectory-plugin-renater-partage-schema
```

Debian

```
apt-get install fusiondirectory-plugin-renater-partage
apt-get install fusiondirectory-plugin-renater-partage-schema
```

RHEL

```
yum install fusiondirectory-plugin-renater-partage
yum install fusiondirectory-plugin-renater-partage-schema
```

Insert schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/openldap/renater-
↳partage-fd.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/openldap/renater-
↳partage-fd.schema
```

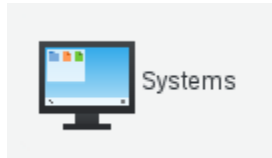
RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/openldap/  
↪renater-partage-fd.schema
```

Functionalities

Add Renater Partage service

Go to Systems



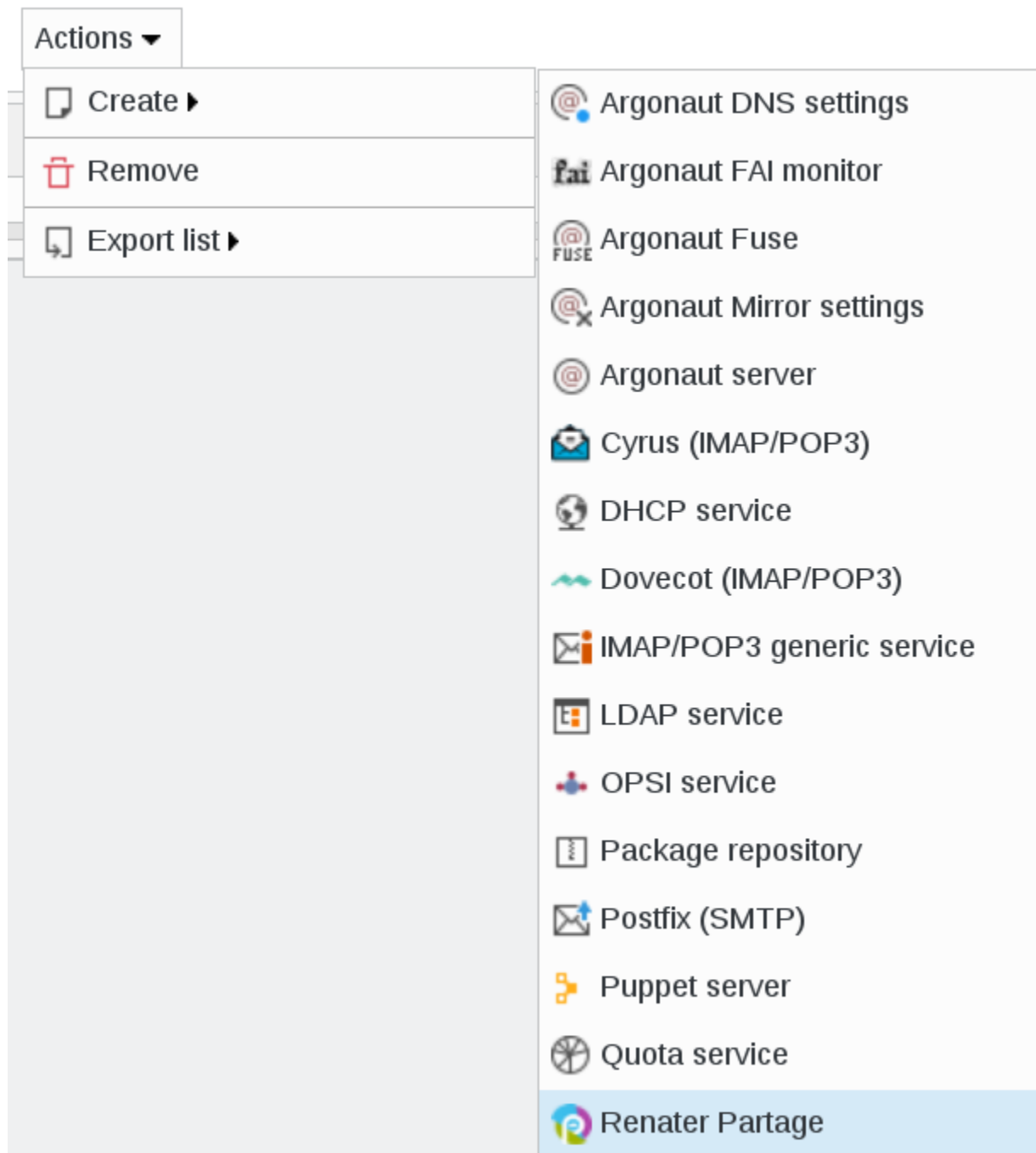
Create your server or edit an existing server



Click on services tab



Add the Renater Partage service

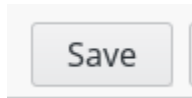


Fill the fields for the Renater plugin and save it

The screenshot shows the FusionDirectory configuration interface. At the top, there is a navigation bar with tabs for various services: Server, NIS Netgroup, DHCP, DNS, Debconf, FAI, FAI Logs, Inventory, FusionInventory, Web link, Puppet, IPMI client, Deployment time frame, Argonaut client, Services, EJBCA, References, and LDAP. The 'Settings' section contains three fields: 'URI*' (empty), 'User Agent*' (set to 'FusionDirectory'), and 'Mailbox deletion*' (set to 'Delete'). Below this is the 'Domains' section, which has a large empty text area and three input fields for 'Domain*', 'Key*', and 'Classes of service*'. An 'Add' button is located below these fields. At the bottom right of the configuration area, there are 'Save' and 'Cancel' buttons.

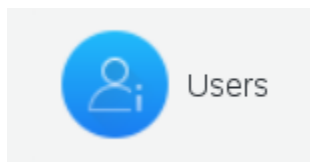
- Global settings :
 - URI: url of the webservice
 - User Agent: name of the user agent
 - Mailbox deletion: should i delete the mailbox after removing the account
- Per domains settings :
 - Domain: mail domain ex: acme.com
 - Key: API key received from Renater
 - Class of service: Service class name | cos id (zimbra cos id)

Click on “save” button bottom right to save your server



Add Renater Partage to a user

Click on “users” button in FusionDirectory main page



Select a user



Go to Mail tab and click on “Add mail settings”

[User](#)
[Unix](#)
[Personal](#)
[Mail](#)
[Samba](#)
[Groups and roles](#)
[SSH](#)
[Nagios](#)

This account has Mail settings disabled. You can enable them by clicking below.

[Add Mail settings](#)

Fill in all the required information : mail account and other addresses and redirections

Mail account	
Primary address*	<input type="text"/>
Server	<input type="text" value="v"/>
Quota size	<input type="text" value=""/>
Quota usage	Unlimited

Vacation message	
Activate vacation message	<input type="checkbox"/>
Vacation message	<div style="border: 1px solid gray; height: 30px; width: 100%;"></div>

Other addresses and redirections	
Alternative addresses	<div style="border: 1px solid gray; height: 40px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; align-items: center;"> <input style="width: 150px;" type="text"/> <input type="button" value="Add"/> <input type="button" value="Delete"/> </div>
Forward messages to	<div style="border: 1px solid gray; height: 40px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; align-items: center;"> <input style="width: 150px;" type="text"/> <input type="button" value="Add"/> <input type="button" value="Add (from list)"/> <input type="button" value="Delete"/> </div>

Advanced mail options	
User is only allowed to send and receive local mails	<input type="checkbox"/>
No delivery to own mailbox	<input type="checkbox"/>

Click on "Apply" button bottom right to save your settings

Add Renater Partage to a group

In the same way you can use the mail tab of a user group to synchronize it with PARTAGE. In this case you can activate and use the PARTAGE tab of the group to fill additional information.

Fields synchronised by renater-partage plugin

Here are the fields which are synchronized for users:

PARTAGE	LDAP	Notes
zimbraCOSId		COS id from Renater Partage service
zimbraMailQuota	gosaMailQuota	Converted to Mio
zimbraPrefMailLocalDelivery-Disabled		Checkbox “No delivery to own mailbox”
zimbraPrefMailForwardingAddress	gosaMailForwardingAddress	Only one value
description	description	
displayName	displayName	
facsimileTelephoneNumber	facsimileTelephoneNumber	
givenName	givenName	
homePhone	homePhone	
l	l	
mobile	mobile	
ou	ou	
pager	pager	
sn	sn	
st	st	
telephoneNumber	telephoneNumber	
title	title	
street	street	Activate “Separate address fields” configuration to see this field
postalCode	postalCode	Activate “Separate address fields” configuration to see this field
postOfficeBox	postOfficeBox	Activate “Separate address fields” configuration to see this field
company	o	
physicalDeliveryOfficeName	roomNumber	
zimbraAccountStatus		Computed from FD lock status
initials		Computed from givenName and sn
carLicense	eduPersonPrincipalName	From SupAnn tab
zimbraHideInGal	supannListeRouge	From SupAnn tab
co	co	From personal tab

Here are the fields which are synchronized for groups:

PARTAGE	LDAP
description	description
displayName	displayName
zimbraMailStatus	fdRenaterPartageGroupMailStatus
zimbraNotes	fdRenaterPartageGroupNotes
zimbraHideInGal	fdRenaterPartageGroupHideInGal
zimbraDistributionListSendShareMessage-ToNewMembers	fdRenaterPartageGroupSendShareMessage-ToNewMembers

Attributes

Attributes synchronised by renater-partage plugin

Here are the fields which are synchronized for users:

PARTAGE	LDAP	Notes
zimbraCOSId		COS id from Renater Partage service
zimbraMailQuota	gosaMailQuota	Converted to Mio
zimbraPrefMailLocalDelivery-Disabled	gosaMailDeliveryMode	Checkbox “No delivery to own mailbox”
zimbraPrefMailForwardingAddress	gosaMailForwardingAddress	Only one value
description	description	
displayName	displayName	
facsimileTelephoneNumber	facsimileTelephoneNumber	
givenName	givenName	
homePhone	homePhone	
l	l	
mobile	mobile	
ou	ou	
pager	pager	
sn	sn	
st	st	
telephoneNumber	telephoneNumber	
title	title	
street	street	Activate “Separate address fields” configuration to see this field
postalCode	postalCode	Activate “Separate address fields” configuration to see this field
postOfficeBox	postOfficeBox	Activate “Separate address fields” configuration to see this field
company	o	
physicalDeliveryOfficeName	roomNumber	
zimbraAccountStatus		Computed from FD lock status
initials		Computed from givenName and sn
carLicense	eduPersonPrincipal-Name	From SupAnn tab
zimbraHideInGal	supannListeRouge	From SupAnn tab
co	co	From personal tab

Here are the fields which are synchronized for groups:

PARTAGE	LDAP
description	description
displayName	displayName
zimbraMailStatus	fdRenaterPartageGroupMailStatus
zimbraNotes	fdRenaterPartageGroupNotes
zimbraHideInGal	fdRenaterPartageGroupHideInGal
zimbraDistributionListSendShareMessage-ToNewMembers	fdRenaterPartageGroupSendShareMessage-ToNewMembers

1.9.25 Sinaps

FusionDirectory Plugins Sinaps

Description

The Sinaps plugin is used to synchronize user and structures information from Sinaps: <http://www.amue.fr/pilotage/logiciels/sinaps/presentation/>

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-sinaps
yaourt -S fusiondirectory-plugin-sinaps-schema
```

Debian

```
apt-get install fusiondirectory-plugin-sinaps
apt-get install fusiondirectory-plugin-sinaps-schema
```

RHEL

```
yum install fusiondirectory-plugin-sinaps
yum install fusiondirectory-plugin-sinaps-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/sinaps-fd-conf.
↪ schema
```


Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/sinaps-fd-conf.  
↪ schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/sinaps-fd-conf.  
↪ schema
```

Configuration

Sinaps

Enable SINAPS integration

Dry run mode

Acknowledgement URL

Dump folder

Application identifier*

Applications identifiers to sync

SAP

UUID prefix*

User base*

User template

API Tokens

token1

Sinaps Acquisition

Acquisition URL

Login

Password

Acquisition external type*

LDAP	Sinaps	
telephoneNumber	TELPRO	<input type="button" value="edit"/> <input type="button" value="delete"/>
facsimileTelephoneNumber	FAXPRO	<input type="button" value="edit"/> <input type="button" value="delete"/>
mail	MAILPRO	<input type="button" value="edit"/> <input type="button" value="delete"/>
mobile	TELEMOBILEPRO	<input type="button" value="edit"/> <input type="button" value="delete"/>

Basic configuration

- **Enable SINAPS integration:** This can be unchecked if you need to deactivate SINAPS integration for some time, or before you finished configuration for instance.
- **Dry run mode:** Can be used for tests, this deactivates sinaps integration but still dumps XML received and what would be send in the dump folder.
- **Acknowledgement URL:** The URL for the acknowledgement end point of Sinaps
- **Dump folder:** If this is set to a directory path, all messages sent to or received from sinaps will be dumped here. Can be useful for debugging.
- **Application identifier:** String that identifies this FusionDirectory instance in Sinaps. This what will be looked for in cross references.
- **Applications identifiers to sync:** Identifiers of other applications for which we want to store cross references in supannRefId field.

- **UUID prefix:** The prefix you want to be added before the UUID in the `supannRefId` field.
- **User base:** The base in which users created by sinaps will be stored.
- **User template:** The template to use for creating such users.
- **API Tokens:** A list of valid API tokens to be accepted by the sinaps end point. You can put what you want in here, but using long strings generated by cryptographically strong random sources is better.

Acquisition configuration

- **Acquisition URL:** The URL for the acquisition end point of Sinaps
- **Login:** The login to use to contact this end point
- **Password:** The password to use
- **Acquisition external type:** The string that will be put in `typeExterne` tag in the XML
- **Contact methods:** Which LDAP fields to be send for acquisition, and as which Sinaps contact method

Functionalities

Once your FusionDirectory instance is correctly set to be receiving user and structures diffusion events in Sinaps and Sinaps plugin is up and running (see *Configuration*), creation and modification on Sinaps objects will be applied in FusionDirectory with the following rules.

Diffusion

When a Diffusion event is received :

- FusionDirectory first looks at the cross references and search for the application identifier set in the configuration
- If no reference is found or the reference found is not found in the LDAP, an object is created.
- Otherwise the matching object is updated.

Structure

Structures are synchronized as *Supann* entities.

FusionDirectory field	Sinaps XML field	Details
ou	libelle20	
description	descriptifLong	
supannCodeEntite	codeStructure	Must be unique as it's used in the dn
supannTypeEntite	codeSousType	You need to configure Sinaps to transcode this into a valid value
supannRefId	referenceCroisee	Formatted as {identifiantApplication}identifiantExterne
telephoneNumber	methodesDeContact/methodeDeContact/valeur	If codeTypeMethodeContact is TEL
facsimileTelephoneNumber	methodesDeContact/methodeDeContact/valeur	If codeTypeMethodeContact is FAX
postalAddress	methodesDeContact/methodeDeContact/*	If codeTypeMethodeContact is ADR and temoinAdressePrincipale is true
supannCodeEntiteParent	liensStructure/lienStructure/codeStructureMere	If codeTypeLien is HIE
fdSupannStartDate	dateDebutValidite	
fdSupannEndDate	dateFinValidite	

Personne

Persons are synchronized as users.

If *rattachements* is empty, the event is considered as a deletion, in which case:

- The current date is stored in fdContractEndDate
- The account is locked
- The fields telephoneNumber, facsimileTelephoneNumber and mobile are emptied
- The mail tab is removed

Otherwise the following fields are synchronized:

FusionDirectory field	Sinaps XML field	Details
supannCivilite	civilite	
sn	nomUsage	
description	descriptifLong	
dateOfBirth	dateNaissance	
gender	sexe	
supannRefId	referenceCroisee	Formatted as {identifiantApplication}identifiantExterne
givenName	pre noms	Cut at first ‘;’
homePhone	methodesDeContact/methodeContact/valeur	If typeMethodeContact is TELPERSO. Can only have one value.
fdPrivateMail	methodesDeContact/methodeContact/valeur	If typeMethodeContact is MAILPERSO. Can have multiple values.
postalAddress	methodesDeContact/methodeContact/*	If codeTypeMethodeContact is ADR and temoinAdressePrincipale is true, and codeTypeAdresse is not ADRPERSO
homePostalAddress	methodesDeContact/methodeContact/*	Same as above but codeTypeAdresse is ADRPERSO
supannEntiteAffectationPrincipale	rattachements/rattachement/roles/role/personne	Only if codeTypeRole is PR and the cross reference is found in the LDAP
supannEntiteAffectation	rattachements/rattachement/roles/role/personne	Same as above
supannEmpCorps	rattachements/rattachement/roles/role/personne	Only if codeTypeRole is CAPRe/elementCarriere/corps
supannActivite	rattachements/rattachement/roles/role/personne	Only if codeTypeRole is CAPRe/elementCarriere/bapReferens
supannRoleGenerique	rattachements/rattachement/fonctionsOccupees	/fonctionOccupee/fonctionRh
supannTypeEntiteAffectation	rattachements/rattachement/fonctionsOccupees	If this cross reference is found in the LDAP
supannEntiteAffectation	rattachements/rattachement/fonctionsOccupees	If this cross reference is found in the LDAP
supannRoleEntite	rattachements/rattachement/fonctionsOccupees	Function Occupee from the three fields above

Acquisition

Once FusionDirectory is properly configured to send Acquisition events to Sinaps, it will do so when a user is modified, with the following rules:

- Fields listed in **Contact methods** in the configuration are sent as the indicated contact methods
- *supannEntiteAffectationPrincipale* is send as a *rattachement* with roles/role/typeRole = EXT and roles/role/externe/typeExterne the value configured in **Acquisition external type** in the configuration

1.9.26 Sogo

FusionDirectory Plugins Sogo

Description

The SOGo plugin is used to manage location (thing and group) in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-sogo
yaourt -S fusiondirectory-plugin-sogo-schema
```

Debian

```
apt-get install fusiondirectory-plugin-sogo
apt-get install fusiondirectory-plugin-sogo-schema
```

RHEL

```
yum install fusiondirectory-plugin-sogo
yum install fusiondirectory-plugin-sogo-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/sogo-fd-conf.
↪schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/calEntry.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/calRessources.
↪schema
```

Debian

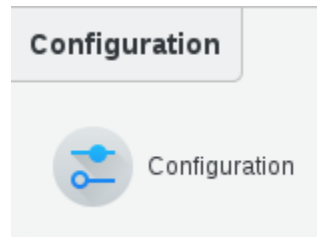
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/sogo-fd-conf.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/calEntry.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/calRessources.schema
```

RHEL

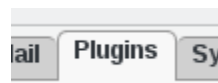
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/sogo-fd-conf.  
↪schema  
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/calEntry.schema  
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/calRessources.  
↪schema
```

Configuration

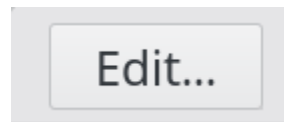
If you need to modify something, you can access to FD configuration of the plugin by the ‘Configuration’ icon or entry in the ‘Addons’ section of the main page of FusionDirectory Configuration Interface:



Click on Plugins tab



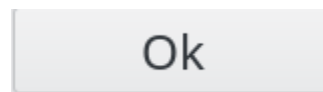
Click on Edit button bottom right and fill in SOGo settings



SOGo RDN : (required) Branch in which SOGo resources will be stored

SOGo	
SOGo RDN*	<input type="text" value="ou=resources"/>

Click on Ok button bottom right to save settings



Functionalities

- How to use SOGo plugin

In your FusionDirectory web interface you have now, in the “Systems” section, click on SOGo icon



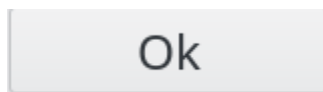
Click on Actions -> Create -> SOGo resource



Fill-in the required information

SOGo resource	
Base	<input type="text" value="/"/>
Entry name*	<input type="text"/>
Mail*	<input type="text"/>
description	<input type="text"/>
Multiplebookings	<input type="text"/>
Kind	location ▾

Click on Ok button bottom right to save your settings



1.9.27 SSH

FusionDirectory Plugins SSH

Description

The SSH plugin provides management for ssh public key in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-ssh  
yaourt -S fusiondirectory-plugin-ssh-schema
```

Debian

```
apt-get install fusiondirectory-plugin-ssh  
apt-get install fusiondirectory-plugin-ssh-schema
```

RHEL

```
yum install fusiondirectory-plugin-ssh  
yum install fusiondirectory-plugin-ssh-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/openssh-lpk.  
↪schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/openssh-lpk.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/openssh-lpk.  
↪schema
```

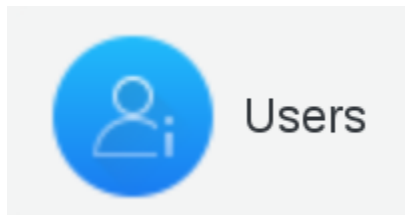
Configuration

No configuration needed for this plugin.

Functionalities

- Create SSH user

Click on Users icon in FusionDirectory



Click on a user



Click on SSH Tab



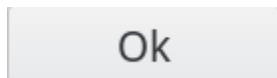
Click on "Add SSH settings" button



Load the user's ssh public key and click "Add" to upload the key



Click on "Ok" button bottom right to save your settings



Now, in Properties tab, you can see the ssh icon



1.9.28 Subcontracting

FusionDirectory Plugins Subcontracting

Description

The Subcontracting plugin is used to manage user from your company but who works in other companies for long periods of time in FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-subcontracting
yaourt -S fusiondirectory-plugin-subcontracting-schema
```

Debian

```
apt-get install fusiondirectory-plugin-subcontracting
apt-get install fusiondirectory-plugin-subcontracting-schema
```

RHEL

```
yum install fusiondirectory-plugin-subcontracting
yum install fusiondirectory-plugin-subcontracting-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i subcontracting-fd.schema
```

Debian

```
fusiondirectory-insert-schema -i subcontracting-fd.schema
```

RHEL

```
fusiondirectory-insert-schema -i subcontracting-fd.schema
```

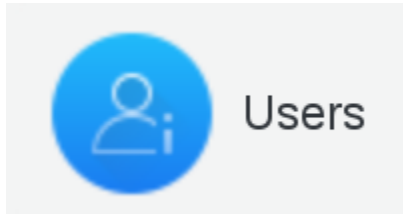
Configuration

No configuration needed for this plugin.

Functionalities

- Create a subcontracting user

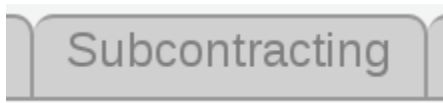
In FusionDirectory, click on Users icon



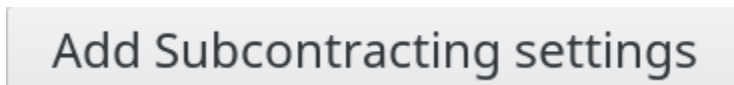
Select a user



Go to Subcontracting tab



Click on “Add Subcontracting settings” button

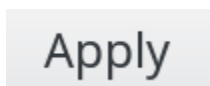


Fill-in SubContracting Information

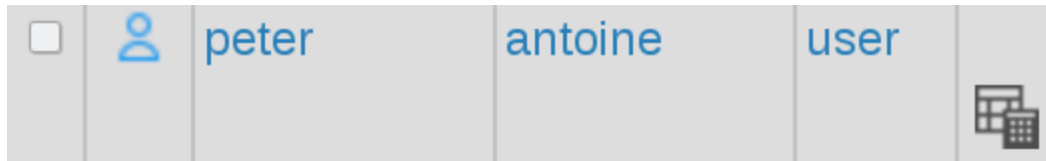
- Intermediate : Contact to the Final Customer
- Final Customer : Final Customer for this mission
- Mail Address : mail address assigned for this mission
- Phone : phone number assigned for this mission
- Street Address : address where this mission is executed

SubContracting Information	
Intermediate	<input type="text"/>
Final Customer	<input type="text"/>
Mail Address	<input type="text"/>
Phone	<input type="text"/>
Street Address	<input type="text"/>

Click on Apply button bottom right to save your settings



Now, on your user profile line you can see the Subcontracting icon



1.9.29 Supann

FusionDirectory Plugins Supann

Description

The Supann plugin is used to store Supann data's in FusionDirectory.

The plugin support Supann from 2009 to 2018 revision 2.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-supann
yaourt -S fusiondirectory-plugin-supann-schema
```

Debian

```
apt-get install fusiondirectory-plugin-supann
apt-get install fusiondirectory-plugin-supann-schema
```

RHEL

```
yum install fusiondirectory-plugin-supann
yum install fusiondirectory-plugin-supann-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/internet2.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/supann-2019-11-
↪ 22.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/supann-fd-conf.
↪ schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/internet2.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/supann_2009.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/supann-fd-conf.
↪ schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/internet2.schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/supann_2009.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/supann-fd-conf.
↪ schema
```

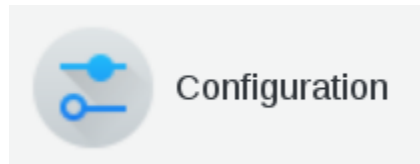
Configuration

The SupAnn standard specifies how to fill cn attribute: <https://services.renater.fr/documentation/supann/supann2018/recommandations2018/attributs/cn>

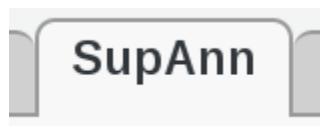
You can change how FusionDirectory fill cn attribute by modifying CN Pattern by `%t[fr_FR]lsn% %t[fr_FR]givenName%` in the configuration backend *People and group storage*

Configure SupAnn Status

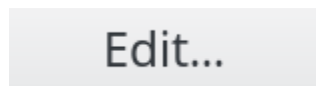
Click on Configuration icon on FusionDirectory main page



Go to SupAnn tab



Click on Edit button bottom right



SupAnn

SupAnn RDN*	<input type="text" value="ou=structures"/>			
SupAnn mail for recovery	<input type="checkbox"/>			
Custom resources	<div style="border: 1px solid #ccc; height: 50px; margin-bottom: 5px;"></div> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="border: 1px solid #ccc; width: 20%; padding: 2px;">Resource</td> <td style="border: 1px solid #ccc; width: 40%; padding: 2px;">Label</td> <td style="border: 1px solid #ccc; width: 40%; padding: 2px; text-align: right;">Add</td> </tr> </table>	Resource	Label	Add
Resource	Label	Add		

Substates	Active	SupannAnticipe	▼ 🗑️
	Active	SupannActif	▲▼ 🗑️
	Active	SupannSursis	▲▼ 🗑️
	Active	Perdu	▲▼ 🗑️
	Inactive	SupannPrecree	▲▼ 🗑️
	Inactive	SupannCree	▲▼ 🗑️
	Inactive	SupannExpire	▲▼ 🗑️
	Inactive	SupannInactif	▲▼ 🗑️
	Inactive	SupannSupprDonnees	▲▼ 🗑️
	Inactive	SupannSupprCompte	▲▼ 🗑️
	Suspended	SupannVerrouille	▲▼ 🗑️
	Suspended	SupannVerrouAdministratif	▲▼ 🗑️
	Suspended	SupannVerrouTechnique	▲ 🗑️

Status Active ▼ Substatus Add

Custom labels

Substatus Perdu ▼ Label Add

- **SupAnn RDN** : branch in which SupAnn structures will be stored (required)
- **SupAnn mail for recovery** : allow the use of mail addresses from the personal mail address field from SupAnn account for password recovery
- **Custom resources** : custom resources and their labels

For example : if you want to add a label resources for the library, fill-in the following fields as shown and click “add”

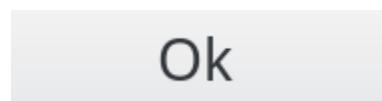
Resource Library Label Library Add

- **Substates** : allowed substates for an account. There are three substates type : Active, Inactive and Suspended
- **Custom labels** : labels for custom substates

For Example, you can add the resource Library having substatus “Perdu”, lost

Substatus Perdu ▼ Label Library Add

When you are done, click on OK button bottom right



Now, in order to see if your settings have been correctly added to a user, go to user SupAnn status tab.

On **Resource** drop-down menu you have now a “Library” entry

On **Substatus** drop-down menu you have now a “Library” entry

Status				
Resource	Status	Substatus	Begin	End
Library	Active	Library	2020-05-06	2020-05-31

Resource*

Status*

Substatus

Start date

End date

Configure Multiservice card

Here is the view of Multiservice Card settings to configure

Multiservice card			
Card types	etudiant	étudiant	
	externe	externe	
	invite	invité, nominative	
	lecteur	lecteur de bibliothèque	
	personnel	professionnelle	
	prestataire	prestataire de services	
	vehicule	véhicule	
	visiteur	visiteur, anonyme	
Card sources	Type <input type="text"/>	Label <input type="text"/>	<input type="button" value="Add"/>
	<input type="text"/>		
Card formats	MIFARE	XLSB	Mifare XLSB
	Technology <input type="text"/>	Encoding <input type="text"/>	Label <input type="text"/> <input type="button" value="Add"/>
Card application domains	<input type="text"/>		
	Option <input type="text"/>	Domain <input type="text"/>	<input type="button" value="Add"/>

- **Card types** : card types and their labels. Please, prefix with {ORIGIN} for non standard types
- **Card sources** : multi service card possible sources, with format `system@domain`
- **Card formats** : allowed formats for multiservice cards
- **Card application domains** : domains for card applications

Structures

Create an establishment

Back on SupAnn structures page, click on Actions -> Create > Supann Establishment

Actions ▾	
<input type="checkbox"/> Create ▸	<input type="checkbox"/> Template ▸
<input type="checkbox"/> Export list ▸	<input type="checkbox"/> From template ▸
<input type="checkbox"/> Edit	<input checked="" type="checkbox"/> SupAnn Establishment

Go to Establishment tab

Establishment

Properties

Root establishment

Name*

Description

Fill-in the following fields :

- **Root establishment** : see this establishment as the root one
- **Name** : the name to write in the o attribute for this establishment (required)
- **Description** : a short description of this establishment

Location	
Telephone	<input type="text"/>
Fax	<input type="text"/>
Location	<input type="text"/>
Address	<input type="text"/>

Fill-in the following fields :

- **Telephone** : phone number of this establishment
- **Fax** : fax number of this establishment
- **Location** : usually the city where this establishment is situated
- **Address** : the postal address of this establishment

SupAnn properties

Establishment code*	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div>
	<input style="width: 90%; border: none;" type="text"/> Add Delete
Establishment type	<div style="border: 1px solid #ccc; padding: 2px; display: inline-block;"> v </div> None v
SupAnn code*	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
Parent entities	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div>
	v Add Delete
Reference IDs	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div>
	<input style="width: 90%; border: none;" type="text"/> Add Delete
Legal name*	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
Home page URI	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
Institution URI	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>
White pages URI	<div style="border: 1px solid #ccc; height: 20px; width: 100%;"></div>

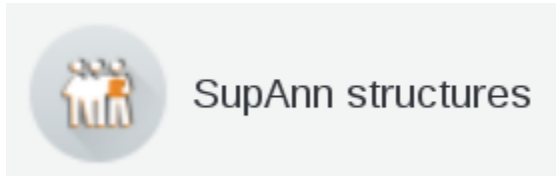
Fill-in the following fields :

- **Establishment code** : the code of this establishment (must have a prefix between { }) (required)
- **Establishment type** : the SupAnn type that best fits this Establishment
- **SupAnn code** : the SupAnn code for this establishment (required)
- **Parent entities** : the parent entities of this entity
- **Reference IDs** : supannRefId - IDs/links for this entity on other systems
- **Legal name** : the legal name of this establishment (required)
- **Home page URI** : the URI of this establishment website home page

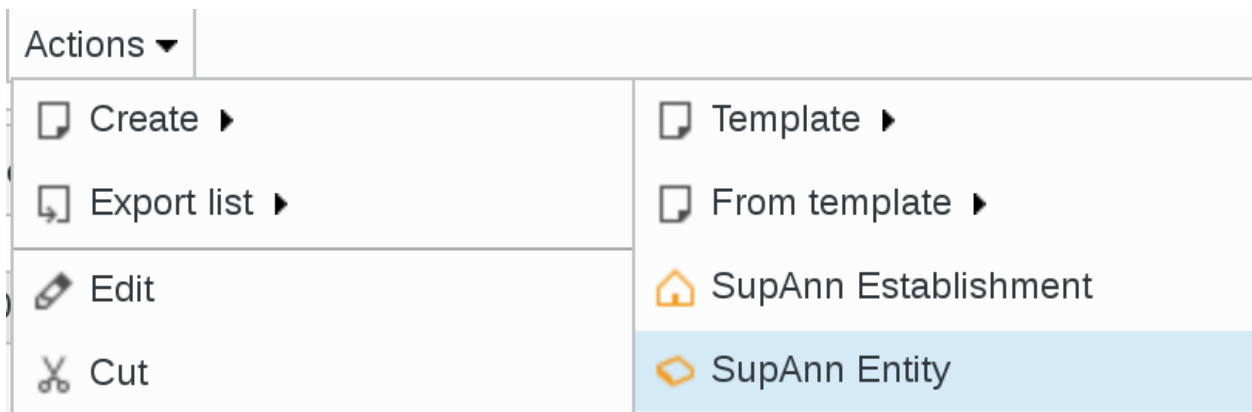
- **Institution URI** : the URI of this establishment institution website
- **White pages URI** : the URI of this establishment white pages

Create an entity

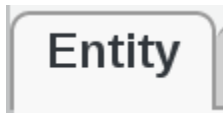
Click on SupAnn Structures icon in FusionDirectory main page



Click on Actions -> Create > Supann Entity



Go to Entity tab



Entity

Name*

Description

Fill-in the following fields :

- **Name** : the name to write in the ou attribute for this entity (required)
- **Description** : short description of this entity

Administrative information

Telephone

Fax

Postal address

Fill-in the following fields :

- **Telephone** : phone number of this entity
- **Fax** : fax number of this entity
- **Postal address** : postal address of this entity

SupAnn information

Entity type	<input type="text" value="None"/>
Entity code*	<input type="text"/>
Parent entities	<div style="border: 1px solid #ccc; height: 100px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; align-items: center;">▼AddDelete</div>
Reference IDs	<div style="border: 1px solid #ccc; height: 100px; width: 100%;"></div> <div style="display: flex; justify-content: space-between; align-items: center;"><input type="text"/>Add</div> <div style="display: flex; justify-content: space-between; align-items: center;">Delete</div>

Fill-in the following fields :

- **Entity type** : the SupAnn type that best fits this entity
- **Entity code** : the SupAnn code of this entity (required)
- **Parent entities** : the parent entries of this entity
- **Reference IDs** : supannRefId - IDs/links for this entity on other systems

Click on OK button bottom right to save your settings

Ok

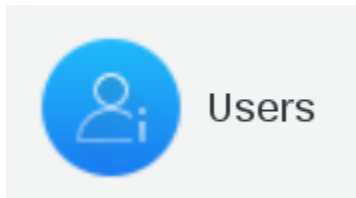
Users

Supann users management

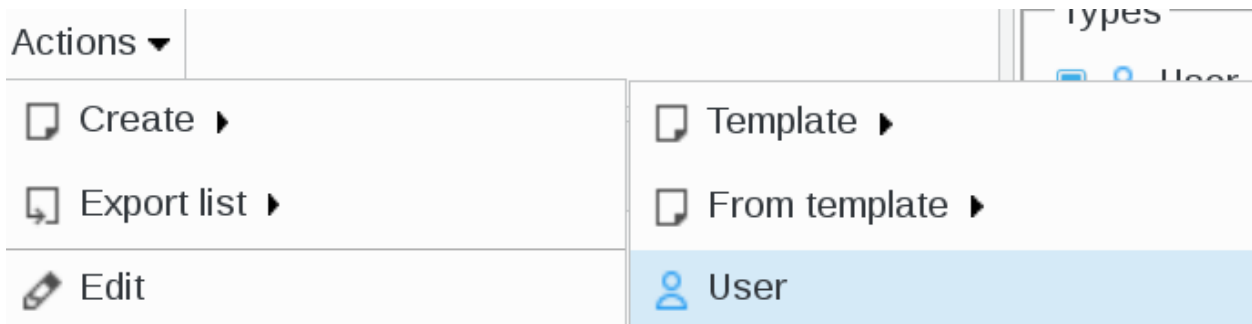
SupAnn Users

- Create an user with supann informations

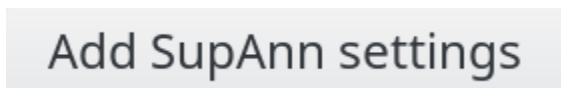
Click on Users icon on FusionDirectory main page



Click on Actions -> Create -> User



Go to SupAnn tab and click on "Add SupAnn settings" button



Identity

Identity	
Civilite	<input type="text" value="v"/>
Alias login	<input type="text"/>
eduPersonPrincipalName	<input type="text"/>
Nickname	<input type="text"/>
Ref ids	<input type="text"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>

Fill-in the following fields :

- **Civilite** : supannCivilite - Civility of this person
- **Alias login** : supannAliasLogin : AN alias for the login of this user
- **eduPersonPrincipalName** : eduPersonPrincipalName - A name that looks like <id>@<domain> which is unique for this domain, and has not been assigned to anyone else recently

- **Nickname** : eduPersonNickname - Can contain a nickname for this user
- **Ref ids** : supannRefId - IDs/links for this user on the other systems

Contact

Contact

Other phone numbers

Add
Delete

Private phone numbers

Personal mobile

Add
Delete

Other email addresses

Add
Delete

Personal email addresses

Add
Delete

Ok
Cancel

Private email addresses

Personal

Add
Delete

Private addresses

Personal

Add
Delete

Red list*

Fill-in the following fields :

- **Other phone numbers** : supannAutreTelephone - Other phone numbers for this user
- **Private phone numbers** : supannTelephonePrive - Private phone numbers for this user
- **Other email addresses** : supannAutreMail - Other e-mail addresses for this users . Each must be unique
- **Personal email addresses** : supannMailPerso - Personal e-mail addresses for this user
- **Private email addresses** : supannMailPrive - Private e-mail addresses for this user
- **Private addresses** : supannAdressePostalePrivee - Private addresses for this user
- **Red list** : supannListeRouge - Should this person be on the red list (required)

Assignment

Assignment	
Primary assignment	None ▾
Assignments	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div> <div style="border: 1px solid #ccc; padding: 2px;"> establishment ▾ Add Delete </div>
Entity types	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div> <div style="border: 1px solid #ccc; padding: 2px;"> ▾ None ▾ Add Delete </div>

Fill-in the following fields :

- **Primary assignment** : supannEntiteAffectationPrincipale - Main assignment of the person
- **Assignments** : supannEntiteAffectation - Reprints assignments of the person in an institution, a component, service, etc.
- **Entity types** : supannTypeEntiteAffectation - TTypes of the entities this person is assigned to

Student profile

Student profile	
INE code	<input type="text"/>
Student ID	<input type="text"/>

Fill-in the following fields :

- **INE code** : supannCodeINE - INE code of this student
- **Student ID** : supannEduId - Sclarity id

Affiliation

Affiliation	
Primary affiliation	None ▾
Affiliations	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div> <div style="border: 1px solid #ccc; padding: 2px;"> Ancien étudiant gardant des relations avec l'établ... ▾ Add Delete </div>
Establishment	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div> <div style="border: 1px solid #ccc; padding: 2px;"> establishment (test) ▾ Add Delete </div>
Parrain	<div style="border: 1px solid #ccc; height: 40px; width: 100%;"></div> <div style="border: 1px solid #ccc; padding: 2px;"> Add Delete </div>

Fill-in the following fields :

- **Primary affiliation** : eduPersonPrimaryAffiliation - Main status of the person
- **Affiliations** : eduPersonAffiliation - Status of the person : student, BIATOSS, teacher, contract, retired, hosted staff, (CNRS, INSERM, etc.), a former student, etc.
- **Establishment** supannEtablissement - INstitution or unit of administrative attachment of the person
- **Parrain** : supannParrainDN - Person or structure responsible for this user

Student registrations

Student registrations									
Establishment	Year	Registration type	Sector	Diploma type	Curriculum	Entity	Diploma	Step	Element
<div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p>Establishment <input type="text"/></p> <p>Registration type <input type="text" value="NON RENSEIGNE"/></p> <p>Diploma type <input type="text" value="1ERE ANNEE COMMUNE AUX ETUDES DE SANTE"/></p> <p>Entity assignment <input type="text" value="None"/></p> <p>Step <input type="text" value="None"/></p> <p><input type="button" value="Add"/></p> </div> <div style="width: 50%;"> <p>Year <input type="text" value="2020"/></p> <p>Disciplinary Sector <input type="text" value="SANS OBJET"/></p> <p>Curriculum year <input type="text" value="Licence"/> <input type="text" value="None"/></p> <p>Diploma <input type="text" value="None"/></p> <p>educational element <input type="text" value="None"/></p> </div> </div>									

Fill-in the following fields :

- **Establishment** : supannEtablissement - Establishment in which this registration was done (required)
- **Registration type** : supannEtuRegimeInscription - The type of this registration (required)
- **Diploma type** : supannEtuTypeDiplome - TYpe of diploma (required)
- **Entity assignment** : supannEntiteAffectation - To which entities does this user belong to
- **Step** : supannEtuEtape - Step can be considered a split (semester, year, etc.) in time of education leading to a diploma
- **Year** : supannEtuAnneeInscription - The year this registration will begin (required)
- **Disciplinary Sector** : supannEtuSecteurDisciplinaire - Disciplinary sector education diploma (required)
- **Curriculum year** : supannEtuCursusAnnee - TYpe of curriculum (L, M, D or X etc.)and the year in the diploma (required)
- **Diploma** : supannEtuDiplome - Diploma prepared by the student
- **educational element** : supannEtuElementPedagogique - Generic description of the content of education with a high level of granularity


Personal profile

Personal profile	
Personal ID	<input type="text"/>
Personal corps	<input type="text" value="None"/>
Activity	<input type="text"/> <input type="text" value="None"/> <input type="button" value="Add"/> <input type="button" value="Delete"/>

Fill-in the following fields :

- **Personal ID** : supannEmpId - Employee identifier
- **Personal corps** : supannEmpCorps - If you select NCORPS, then you will have a drop-down menu showing all the employee functions available
- **Activity** : supannActivité - category of profession

Roles



- **Generic role** : select SUPANN and you will see a drop-down menu including all the different roles :



SupAnn custom lists

- How use custom lists

For some attributes like diplome you can extend them with a custom file in `/etc/fusiondirectory/supann/`

This process works for the following attributes:

- supannTypeEntiteAffectation (entite) only from FD 1.3
- supannEtuDiplome_diplome (diplome)
- supannEtuEtape (etuetape is default empty)
- supannEtuElementPedagogique (etuelementpedagogique is default empty)
- supannActivite (activite)
- supannRoleGenerique (role)

You need to do the following to make it work.

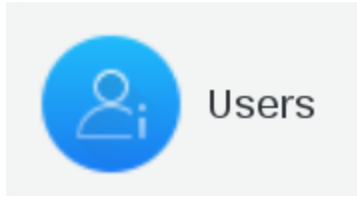
- Add a file like `diplome_CUSTOM` in `/etc/fusiondirectory/supann/`
- Fill your file with your customs entries

In FusionDirectory you will need to select your “CUSTOM” part before selecting your entry that are in your file

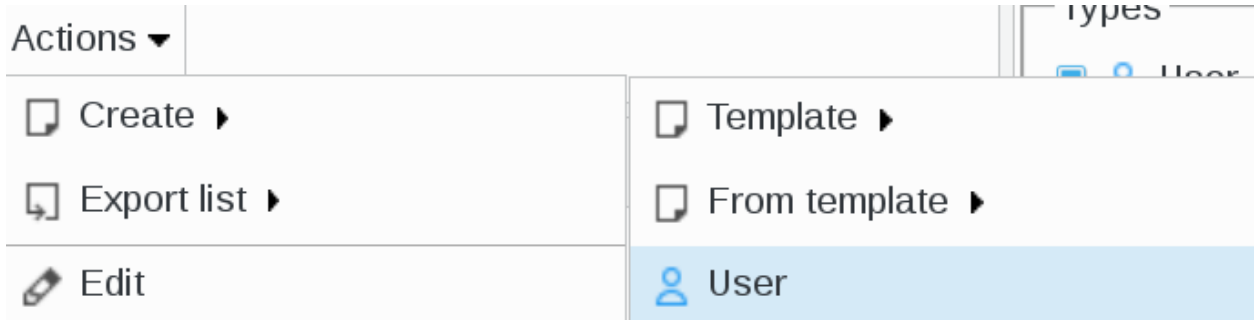
SupAnn Status

The plugin also adds a tab on users to see/set the current state of their resources. Default available resources are the mail account and the account itself.

Click on Users icon on FusionDirectory main page



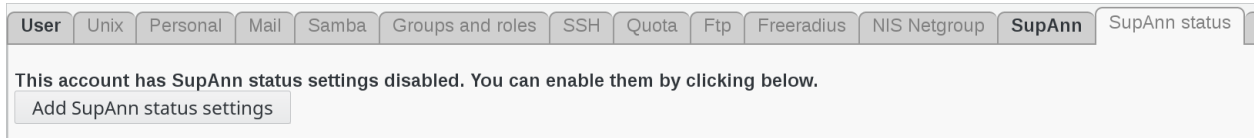
Click on Actions -> Create -> User



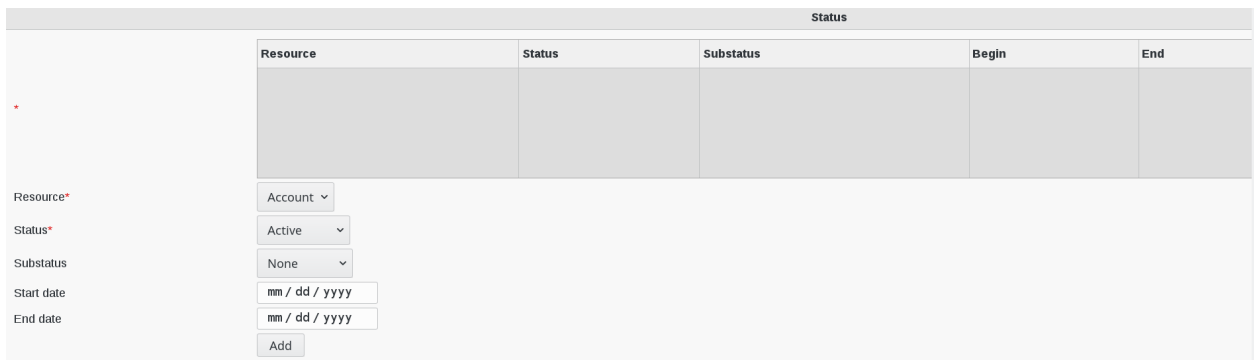
Go to SupAnn tab and click on "Add SupAnn settings" button



Now go to SupAnn status tab and click on "Add SupAnn status settings" button



You will now see the Status Settings menu to fill



Fill-in the following fields :

- * : State of the account and associated resources (required)
- **Resource** : which resource this state concerns (required)
- **Status** : active status (required)
- **Substatus** : substatus
- **Start date** : date this status started
- **End date** : date this status will end

You can also set the start date and end date of the current status for a resource.

If you set an end date, you either have to change the status yourself or use our tool **argonaut-user-reminder** with the option **-supann-update**.

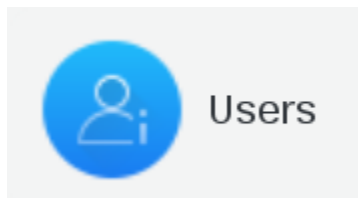
argonaut-user-reminder should run daily to keep the status consistent.

Click on “OK” button bottom right to save your settings

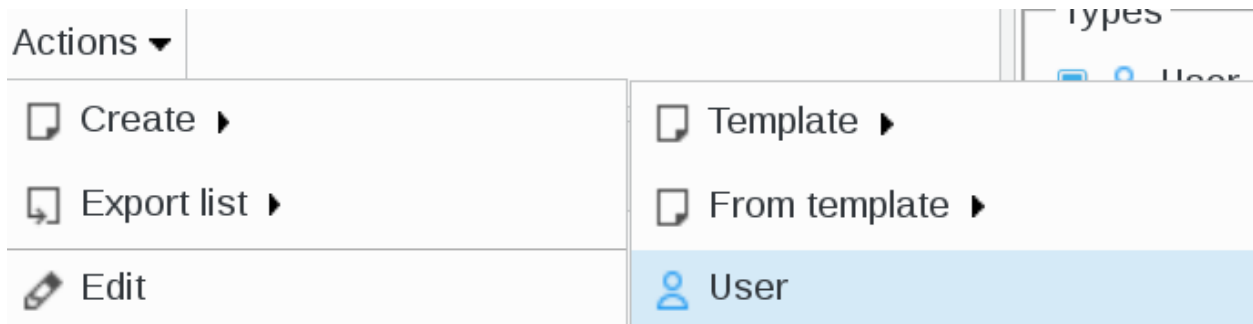


SupAnn Multiservice card

Click on Users icon on FusionDirectory main page



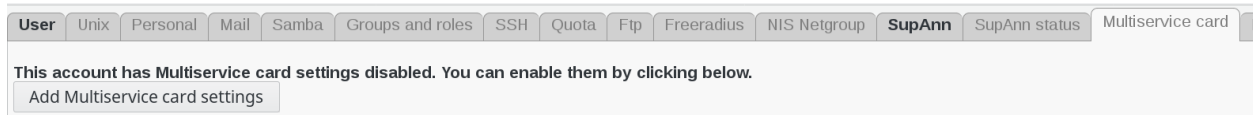
Click on Actions -> Create -> User



Go to SupAnn tab and click on “Add SupAnn settings” button



Go to MULTIservice card tab and click on “Add MULTIservice card settings” button



Cards

Cards						
Type	Format	Id	Valid	Source	End date	
Mifare XLSB						

Type*
 Format*
 Id*
 Valid*
 Source
 End date

Fill-in the following fields :

- **Mifare XLSB** : SupAnn CMS Affectation
- **Type** : supannCMSType - Card type (required)
- **Format** : card format (required)
- **Id** : card id (required)
- **Valid** : card validity (required)
- **Source** : card managing system and establishment
- **End date** : end of validity date, if any

Applications

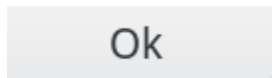
Applications						
Type	Source	Domain	Id	Valid	End date	
Applications						

Type*
 Source*
 Domain*
 Id*
 Valid*
 End date

Fill-in the following fields :

- **Applications** : supann CMS Application Affectation
- **Type** : supannCMSType - Card type (required)
- **Source** : Card managing system and establishment (required)
- **Domain** : applicatioj domain (required)
- **Id** : application id (required)
- **Valid** : application validity (required)
- **End date** : end of validity date, if any

When you are finished, click on “OK” button bottom right



1.9.30 Systems

FusionDirectory Plugins Systems

Description

The Systems plugin is used to manage all kinds of systems, servers, workstation, terminal, phones, gsm ...

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-systems
yaourt -S fusiondirectory-plugin-systems-schema
```

Debian

```
apt-get install fusiondirectory-plugin-systems
apt-get install fusiondirectory-plugin-systems-schema
```

RHEL

```
yum install fusiondirectory-plugin-systems
yum install fusiondirectory-plugin-systems-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/service-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd-conf.
↪ schema
```

Debian

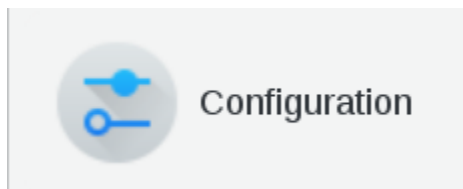
```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/service-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/systems-fd.schema
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/systems-fd-conf.
↪ schema
```

RHEL

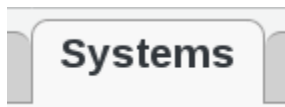
```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/service-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd.
↪ schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd-conf.
↪ schema
```

Configuration

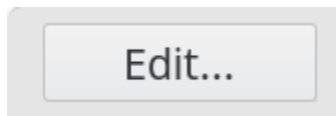
Click on Configuration icon in FusionDirectory main page



Go to Systems tab



Click Edit button bottom right in order to set your Systems data



Here are the systems configuration entries

Configuration Triggers Plugins POSIX Mail Samba SupAnn SINAPS Recovery Reminder Invitations **Systems** FAI References LDAP

LDAP tree for systems

Systems RDN*	ou=systems
Server RDN*	ou=servers,ou=systems
Workstations RDN*	ou=workstations,ou=systeme
Terminal RDN*	ou=terminals,ou=systems
Printer RDN*	ou=printers,ou=systems
Component RDN*	ou=netdevices,ou=system:
Phone RDN*	ou=phones,ou=systems
Mobile phone RDN*	ou=mobile,ou=systems

Miscellaneous

Encodings	ISO8859-1	ISO8859-1 (Latin 1)		
	ISO8859-2	ISO8859-2 (Latin 2)		
	ISO8859-3	ISO8859-3 (Latin 3)		
	ISO8859-4	ISO8859-4 (Latin 4)		
	ISO8859-5	ISO8859-5 (Latin 5)		
	UTF-8	UTF-8		
	cp850	CP850 (Europe)		

Encoding Label

Mandatory IP

- Component
- Printer
- Server
- Terminal
- Workstation

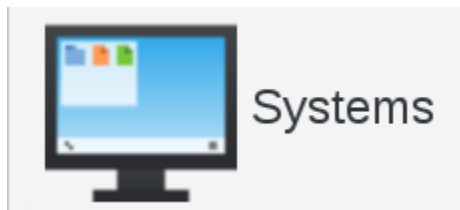
Fill-in the following fields :

- **Systems RDN** : branch in which systems will be stored (required)
- **Server RDN** : branch in which servers will be stored (required)
- **Workstations RDN** : branch in which workstations will be stored (required)
- **Terminal RDN** : branch in which terminals will be stored (required)
- **Printer RDN** : branch in which printers will be stored (required)
- **Component RDN** : branch in which network devices will be stored (required)
- **Phone RDN** : branch in which phones will be stored (required)
- **Mobile phone RDN** : branch in which mobile phones will be stored (required)
- **Encodings** : available encodings for share services
- **Mandatory IP** : objects types for which IP field should be mandatory

Functionalities

Create a system

Click on Systems icon on FusionDirectory main menu



You are now on Systems main page and we will create a server as an example

Name	IP	Mac	Description	Services	Release	Actions
demo-dev	195.154.20.159					[Edit] [Delete] [Export] [Import] [Refresh] [Add]

Click on Actions → Create → Server

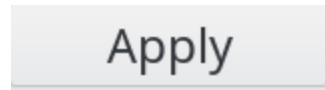
You can now configure your server

Properties	
Base	/
Name*	demo-dev
Description	
Location	
Lock this server	<input type="checkbox"/>

Fill-in the following fields :

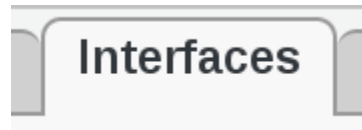
- **Base** : object base
- **Name** : the name of the server (required)
- **Description** : a short description of the server
- **Location** : the location of the server
- **Lock this server** : this will prevent the server from being reinstalled

Click on Apply button to save your data



Interfaces

We have added a new useful feature in FusionDirectory which allows you to add one or more interfaces to your machine. Go to the Interfaces tab.



Click on Actions → Create → Network Interface



You will arrive on the Interface Configuration page.



Fill in the following fields:

- **Name** : interface name (required)
- **Mac address** : MAC address of the system
- **IP address** : IP addresses this system uses (v4 or v6)

1.9.31 User-reminder

FusionDirectory Plugins user-reminder

Description

The user-reminder plugin is a plugin that reminds the users that their account will expire.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-user-reminder  
yaourt -S fusiondirectory-plugin-user-reminder-schema
```

Debian

```
apt-get install fusiondirectory-plugin-user-reminder  
apt-get install fusiondirectory-plugin-user-reminder-schema
```

RHEL

```
yum install fusiondirectory-plugin-user-reminder  
yum install fusiondirectory-plugin-user-reminder-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/user-reminder-  
↪fd-conf.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/user-reminder-fd-  
↪conf.schema
```

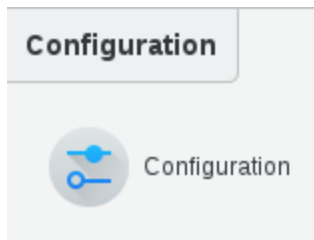
RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/user-reminder-  
↪fd-conf.schema
```

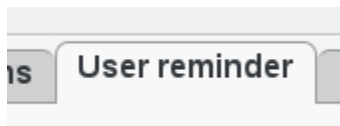
Configuration

- How to configure User-Reminder plugin

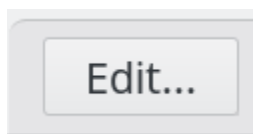
Click on COnfiguration icon in FusionDirectory



Go to User reminder tab



Click on the edit button at the bottom right



Fill-in user-reminder settings:

- Delay before expiration: days before expiration when we send the email
- Delay before sending again: days before sending a second email
- Extension of the validity: number of days for the postpone
- Sender email address: sender e-mail address
- Allow use of alternate addresses: tick this box if needed

User reminder settings	
Delay before expiration*	15
Delay before sending again*	7
Extension of the validity*	15
Sender email address*	to.be@chang.ed
Allow use of alternate addresses*	<input type="checkbox"/>

Fill-in Ppolicy email settings:

- Forward alerts to the manager : tick to send alert to manager
- Subject : subject of the e-mail
- Body (%s are cn and login) : content of the e-mail

Ppolicy email settings	
Forward alerts to the manager	<input type="checkbox"/>
Subject	[FusionDirectory] Votre m
Body (%s are cn and login)	Dear %1\$s, your password for account %2\$s is about

Fill-in Alert email settings:

- Forward alerts to the manager : thick to send alert to manager
- Subject : subject of the e-mail
- Body (%s are cn and login) : content of the e-mail

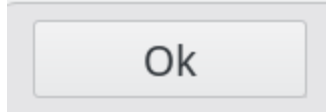
Alert email settings	
Forward alerts to the manager*	<input type="checkbox"/>
Subject	[FusionDirectory] Votre co
Body (%s are cn, login, and link token)	Dear %1\$s, your account %2\$s is about to expire.

Fill-in Confirmation email settings:

- Forward alerts to the manager : thick to send alert to manager
- Subject : subject of the e-mail
- Body (%s are cn and login) : content of the e-mail

Confirmation email settings	
Forward confirmation to the manager*	<input type="checkbox"/>
Subject	[FusionDirectory] L'expirati
Body (%s are cn and login)	Cher %1\$s, l'expiration de votre compte %2\$s a

Click on “ok” to save your configuration



!/Don't forget to add password expiration date in Unix tab. !/

Functionalities

The user reminder plugin is used in conjunction with the [argonaut-user-reminder](#) program

1.9.32 Weblink

FusionDirectory Plugins Weblink

Description

The weblink plugin gives a link to simply access your configuration interface of your device, system, etc.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-weblink  
yaourt -S fusiondirectory-plugin-systems-schema
```

Debian

```
apt-get install fusiondirectory-plugin-weblink  
apt-get install fusiondirectory-plugin-systems-schema
```

RHEL

```
yum install fusiondirectory-plugin-weblink  
yum install fusiondirectory-plugin-systems-schema
```

Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/  
fusiondirectory/systems-fd.schema /etc/ldap/schema/  
fusiondirectory/systems-fd-conf.schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/
fusiondirectory/systems-fd.schema /etc/ldap/schema/
fusiondirectory/systems-fd-conf.schema
```

RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd.
↪schema
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/systems-fd-conf.
↪schema
```

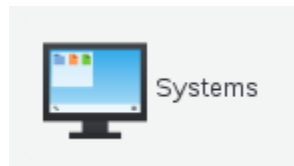
Configuration

No configuration needed for this plugin.

Functionalities

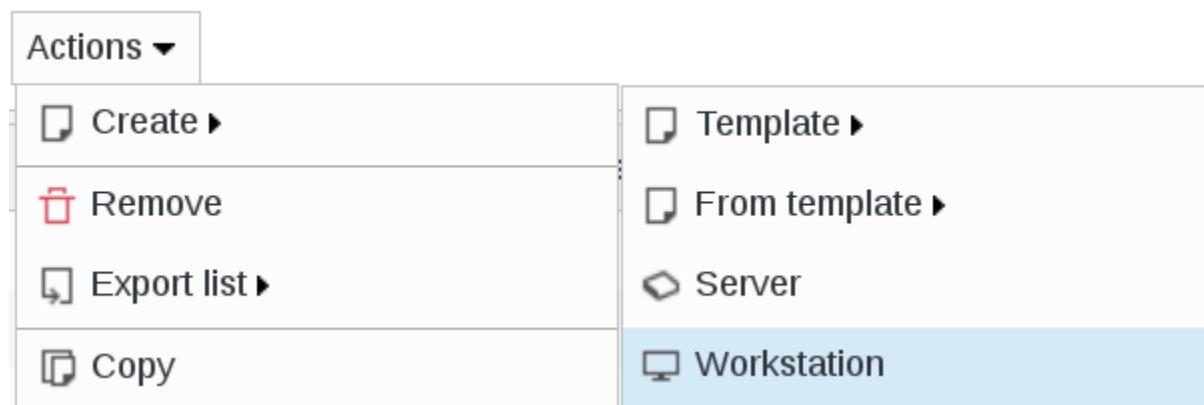
- How to use the weblink plugin

Click on Systems icon in FusionDirectory



- Create a workstation

Click on Action -> Create -> Workstation



Click on the web link tab



Click on Add Web link settings

Add Web link settings

Choose the protocol for your link

Settings

Protocol*

Arbitrary links

Click on OK button bottom right to save

Ok

1.9.33 Webservice

FusionDirectory Plugins Webservice

Description

The Webservice plugin is used to configure webservice of FusionDirectory.

Installation

Install packages

Archlinux

```
yaourt -S fusiondirectory-plugin-webservice  
yaourt -S fusiondirectory-plugin-webservice-schema
```

Debian

```
apt-get install fusiondirectory-plugin-webservice  
apt-get install fusiondirectory-plugin-webservice-schema
```

RHEL

```
yum install fusiondirectory-plugin-webservice  
yum install fusiondirectory-plugin-webservice-schema
```


Install schemas

Archlinux

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/webservice-fd-conf.  
↪schema
```

Debian

```
fusiondirectory-insert-schema -i /etc/ldap/schema/fusiondirectory/webservice-fd-conf.  
↪schema
```

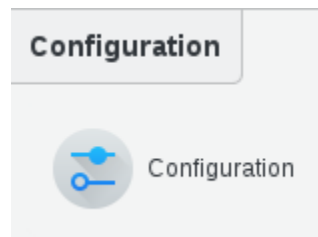
RHEL

```
fusiondirectory-insert-schema -i /etc/openldap/schema/fusiondirectory/webservice-fd-  
↪conf.schema
```

Configuration

- Webservice configuration

Go to Configuration



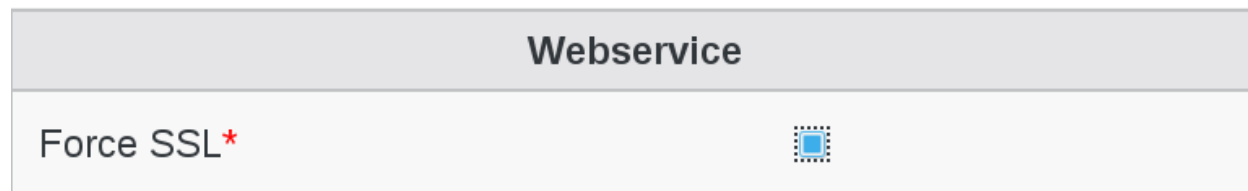
Open Plugins tab



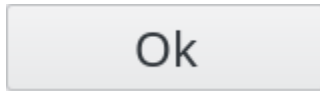
Click on Edit button bottom right



«Force SSL» option is on by default, you can untick it if you want to call the webservice over HTTP



Click on OK button bottom right to save it



Functionalities

FusionDirectory WebService plugin exposes a REST webservice that you can use if you want to access LDAP content through FusionDirectory system. This way, you ensure that your ldap objects are kept consistent, your are able to use the system templates and have restrictions applied by acls.

On top of that you have a nicer API than the low-level LDAP one.

The REST API is documented [here](#).

Note: Note that you can allow HTTP in plugin configuration, but please avoid doing this except for testing purposes.

Plugins

Systems

Systems have a special networkInterfaces attribute in the interfacesManagement tab allowing to access the interfaces of a system.

Examples:

Get interfaces:

```
GET /objects/server/cn=server1,ou=servers,ou=systems,dc=example,dc=com/
↳interfacesManagement/networkInterfaces
Response:
[
  {
    "cn": ["eth0"],
    "macAddress": ["00:11:22:33:44:88"],
    "ipHostNumber": ["192.168.2.2"],
    "dn": "cn=eth0,cn=server1,ou=servers,ou=systems,dc=example,dc=com"
  },
  {
    "cn": ["eth1"],
    "macAddress": ["00:11:22:33:44:99"],
    "ipHostNumber": ["192.168.2.22"],
    "dn": "cn=eth1,cn=server1,ou=servers,ou=systems,dc=example,dc=com"
  }
]
```

Add an interface:

```
PATCH /objects/server/cn=server1,ou=servers,ou=systems,dc=example,dc=com/
↳interfacesManagement/networkInterfaces/values [{"cn":["eth2"],"ipHostNumber":["192.
↳168.2.3"]}]
```

1.10 Templates

FusionDirectory Templates

1.10.1 Functionalities

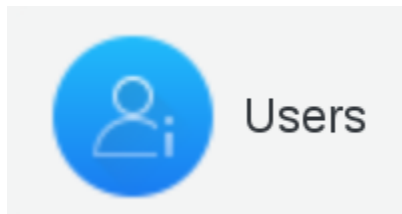
FusionDirectory templates allow you to automatically fill some fields at object creation, or automatically fill them on existing objects to make them consistent by applying a template.

- Define precisely how the attributes will be constructed, uppercase, lowercase, first letter of an attribute+4 letters of another attribute ...
- Fill other attributes based on value stored elsewhere
- Generate random password
- Calculate date / time for account expiration

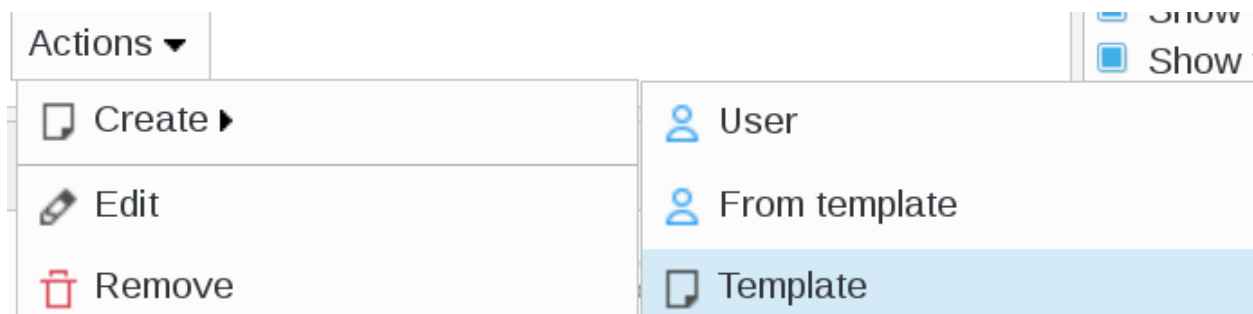
and so much more ...

1.10.2 Create a user template

Click on tab or icon Users, in the Users and groups section in FusionDirectory



Click Actions -> Create -> Template

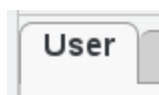


Depending on which other plugins you have installed, you can configure your template like you need. Below, you can find some exemple.

You can find the documentation on how to create a macro here [Macros](#).


User


The user tab is the base of your template, click on User tab



Generic User tab : this is the base tab to create a user template.

Template name*



 Personal information




Last name*

First name*

Description


Picture No file selected.  

 Account information

Base

Login*

Preferred language

Password method* 

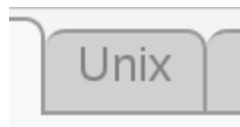
Password

In this example we set the following macros to create a user :

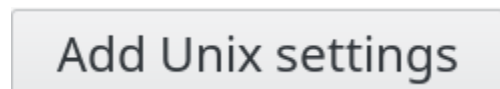
- Login : **%alps[1]givenName% %alpsn%** meaning that login will be first letter of first name in low character followed by last name in low characters
- Password : **%r[12]||%** meaning that password will contain 12 random characters

Unix

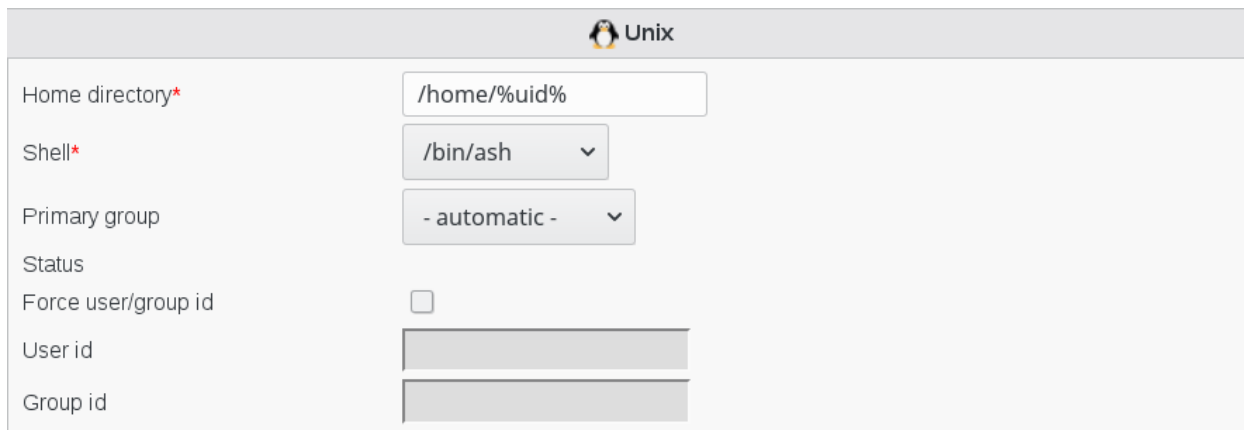
When you are creating or editing your template, click on Unix tab Then click on Add Unix settings. A new dialog is opened



Then click on Add Unix settings. A new dialog is opened



Fill-in Unix settings



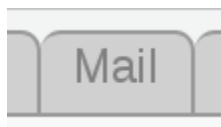
- Home directory : the path to the home directory of this user (required).

You can use macro to automatically build the name of home directory users

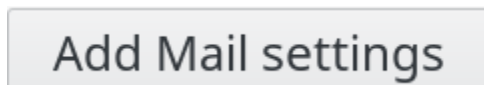
For example : **/home/%uid%**

Mail

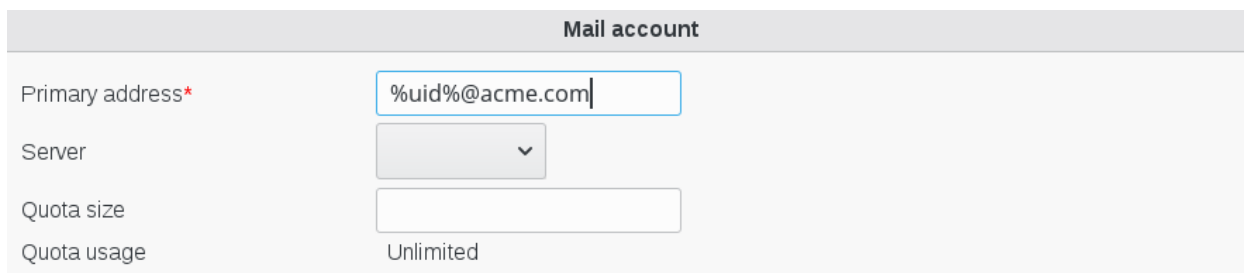
When you are creating or editing your template, click on Mail tab



Then click on Add Mail settings. A new dialog is opened



Fill-in Mail account settings

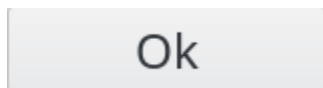


- Primary address : primary mail address (required)

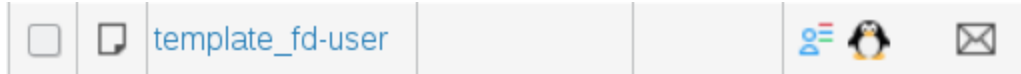
You can use the macros to automatically build the name of mail user account.

In this example we set macro **%uid%@acme.com** meaning that the mail account will be **userid@acme.com**

Click on Ok button bottom right



Now on the main page, on you template line, you will see the mail icon



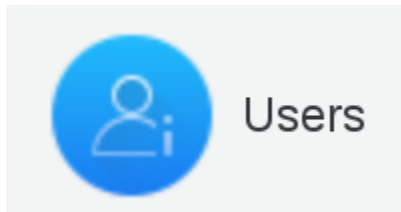
1.10.3 Use a user template

- How to apply a template

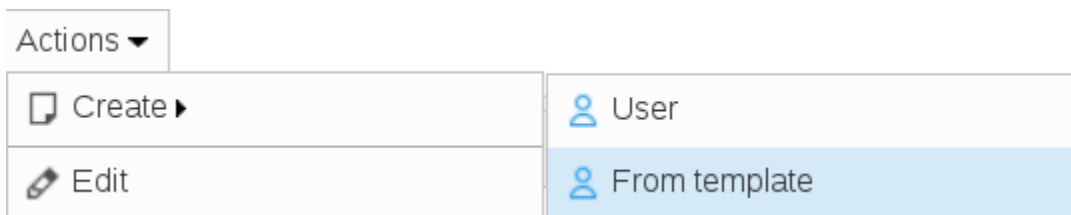
Here is an example of how templates works.

We will take the most common example of creating a user from a template.

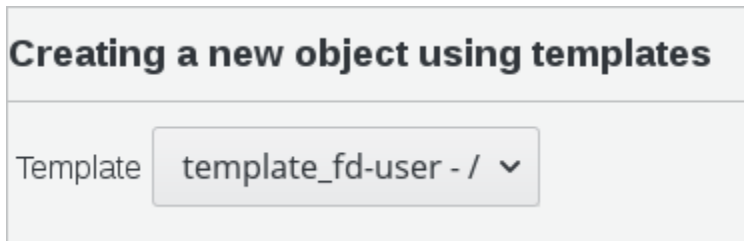
Click on tab or icon Users, in the Users and groups section in FusionDirectory



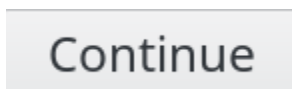
Click on Actions -> Create -> From template



A new page called Creating a new object using templates will appear. Choose the template the you wish to use from the drop-down menu



Click on Continue button bottom right



Fill-in the required information

Creating a new object using templates

user

Last name*	<input type="text" value="Pallin"/>
First name*	<input type="text" value="Poppy"/>
Base	<input type="text" value="/"/>

- Last name : last name of this user (required)
- First name : first name of this user (required)

- Base : object base

Click on Continue button bottom right



You will now automatically see the User tab filled as per the macros you have put in your template.

See how to use macros : (url à mettre)

In this example, the user personal info look like this :

The screenshot shows a web interface for user management. At the top, there is a navigation bar with tabs: 'User', 'Unix', 'Personal', 'Mail', 'Samba', 'Groups and roles', 'SSH', 'Nagios', 'Quota', 'Proxy', 'Ftp', 'Freeradius', and 'NIS N'. The 'Personal information' tab is active, showing a profile picture placeholder (a silhouette of a head) and fields for 'Last name*' (Pallin), 'First name*' (Poppy), and 'Description'. Below these is a 'Picture' field with a 'Browse...' button and the text 'No file selected.' To the right of the 'Account information' tab, there is a table of fields:


Account information	
Base	/
Login*	ppallin
Preferred language	[Dropdown menu]
Password method*	ssha [Dropdown menu]
Password	●●●●●●●●
Password again	●●●●●●●●

And the Unix info look like this :

User **Unix** Personal Mail Samba Groups and roles SSH Nagios Quota Proxy Ftp Freeradius NIS

This account has Unix settings enabled. You can disable them by clicking below.

[Remove Unix settings](#)

 **Unix**

Home directory*

Shell* ▾

Primary group ▾

Status active

Force user/group id

User id <>

Group id <>

And the Mail info look like this :

User **Unix** Personal **Mail** Samba Groups and roles SSH Nagios Quota Proxy Ftp Freeradius NIS

This account has Mail settings enabled. You can disable them by clicking below.

[Remove Mail settings](#)

Mail account

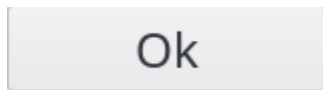
Primary address*

Server ▾

Quota size ▾ ▹

Quota usage Unlimited

Click on Ok button bottom right



Now on the main page you can see the new user, with the Unix and Mail icons



1.10.4 Macros

You can use macros to automate the creation of attributes based on rules inside the templates. They can also be used in trigger definitions.

How to use a macro

A macro is enclosed in % and contains an LDAP attribute name. It may optionally state modifiers to apply to the attribute, followed by a | between modifiers and the attribute name. Some modifiers accept parameters enclosed in [] and separated by commas. Modifiers are applied from left to right.

```
%sn%           The value of "Last name" field, entered during account creation.
```

There are some special variables which may also be used instead of an LDAP attribute name, most of them are specific to triggers (see *Special variables*), but the following ones are also available to templates:

- **%callerDN%** gives the DN of the author of the modification
- **%callerCN%** gives the CN of the author of the modification
- **%callerUID%** gives the UID of the author of the modification
- **%callerSN%** gives the SN of the author of the modification
- **%callerGIVENNAME%** gives the GIVENNAME of the author of the modification

Some modifiers do not even require an LDAP attribute name as they generate a value on their own, such as **r** or **d**.

Modifiers

a

The **a** modifier can be used to return the unaccented version of the parameter.

Examples:

```
%a|sn%           "Last name" field returned in unaccented.
                  If "sn=Valérie" then the returned value is "Valerie"
```

b

The **b** modifier can be used to convert to base64.

c

The **c** modifier can be used to put a comment. An example :

```
%c|this is just a comment%           returns an empty string.
```

It can also be used to make a template uid unique when 2 templates have the same uid pattern:

```
%a|sn%c|template1%
%a|sn%c|template2%
```

d

The **d** modifier can be used to generate dates and times.

- First parameter is date string (defaults to “now”)
- Second one is date format (defaults to “d.m.Y”, to be used in date fields).

Examples:

```
%d|%          15.03.2017
%d[tomorrow]|% 16.03.2017
%d[today+6days]|% 21.03.2017
%d[now, l jS \of F Y h:i:s A]|% Wednesday 15th of March 2017 02:12:18 PM
```

as POSIX date fields expects a specific format you need to add 'epoch' as second parameter to the d modifier.

```
%d[today+30days, epoch]|%          15.04.2017
```

i

The **i** modifier can be used to have the first letter of a word in capital letters and the rest in lower case letters.

Examples:

```
%i|sn% if our sn is "MY LAST NAME" we will have "My Last Name" in description.
```

We do not allow element to be transformed by itself.

Example : we cannot do %ilsn% in %sn% because it would make a loop.

If we try it we will have this kind of error

```
Recursive dependency in the template fields: "givenName" cannot depend on "givenName"
↳as "givenName" already depends on "givenName".
```

l

The **l** modifier can be used to return the lowercase version of the parameter.

```
%l|sn%          "Last name" field returned in lowercase.
                 If "sn=Valérie" then the returned value is "valérie"
```

n

The modifier **n** can be used to generate numbers. As the **r** and **d** modifiers it should be used alone, with no attribute name.

This modifier will make sure the result value is unique for the filled field in the LDAP. The number will get as high as needed to ensure that.

- First parameter is whether the number should always be there or only in case of duplicates (1 or 0, defaults to 0).
- Second parameter is starting number, defaults to 1.
- Third parameter is step, defaults to 1.

Examples:

```
%n|%          If not unique, adds a number starting at 1
%n[1]|%       A number starting at 1
%n[0, 2]|%    If not unique, adds a number starting at 2
%n[1,10]|%    A number starting at 10
%n[1,20,10]|% A number starting at 20 and going up ten by ten
```

p

The **p** modifier can be used to remove whitespaces. It can also be used for any search and replace based on preg_replace.

For this provide 2 arguments

- first one is regexp
- second one is replacement string.

Default values are `/s/` and empty string, to remove all whitespaces as in previous behavior.

Examples:

```
%p|sn%           "Last name" field, without whitespaces. "O Connor" becomes "OConnor".
%p[/\s/, -]|sn%  "Last name" field, with whitespaces replaced by dashes. "O Connor"
↳becomes "O-Connor".
```

r

The **r** modifier can be used to generate random strings, for instance for passwords.

It can take up to three arguments

- min length
- max length
- character type.

Third argument should be either

- **l** for letters
- **d** for digits
- **b** for both.

Default is both.

The default length is 8 and if there is only one argument it will be used as a fixed length.

Examples:

```
%r[6,10]|%       a random string with a random length between 6 and 10 chars.
↳containing both letters and digits
%r|%             a random string of length 8
%r[12]|%         a random string of length 12
%r[5,10,d]|%     a random string of a random length between 5 and 10 containing only.
↳digits
```

s

The **s** modifier can be used to generate substrings.

Examples:

```
%s[1,3]|sn%      a substring of "Last name" field, taking 3 characters and.
↳starting at position 1.
%s[0,1]|sn%      the first character of "Last name" field.
%s[1]|sn%         the first character of "Last name" field (short syntax).
%s[5]|sn%         a substring of "Last name" field, taking 5 first characters.
%s[2,4-8]|sn%    a substring of "Last name" field, taking minimum 4 characters.
↳(more if needed for unicity)
↳and starting at position 2.
%s[4-8]|sn%      a substring of "Last name" field, taking minimum 4 characters.
↳(more if needed for unicity).
%s[-5,2]|sn%     a substring of "Last name" field, taking 2 characters and.
↳starting 5 characters from the end.
%s[-5,5]|sn%     a substring of "Last name" field, taking the last 5 characters.
```

t

The **t** modifier can be used to return the transliterated version of the parameter. The parameters are the list of locales to use for transliteration (first one will be used by non-interactive uses of the template).

Examples:

```
%t[de_DE]|sn%           "Last name" field returned transliterated.
                        If "sn=Süßkartoffel" then the returned value is
↳"Suesskartoffel"
```

Note that the locale used must be installed on the server (and web server needs to be restarted after locale installation).

Array modifiers

Array modifiers are used for multivaluated LDAP attributes and are represented as uppercase letters. If no array modifier is used on a multivaluated attribute, the “first” value is used.

C

The **C** modifier (added in version 1.0.10) returns the count of values in the attribute. It can be 0.

```
%C|arrayAttribute%      returns the number of values in arrayAttribute
```

F

The **F** modifier returns the first value of the array

J

The **J** modifier returns the values joined together. It takes the separator as parameter.

```
%J[:]|arrayAttribute%   returns the values joined and separated by : character
```

L

The **L** modifier returns the last value of the array

M

The **M** modifier returns values that matches the regular expression passed as parameter. As it returns an array, an other modifier is usually used after such as J or C.

```
%M[/a$/]|C|arrayAttribute%  returns the number of values ending with the
↳letter a
```

Combining examples

```
%al|sn%                 "Last name" field returned in lowercase unaccented.
                        If "sn=Valérie" then the returned value is "valerie"
```

```
%au|sn%                 "Last name" field returned in uppercase unaccented.
                        If "sn=Valérie" then the returned value is "VALERIE"
```

```
%alp|sn%                "Last name" field returned in lowercase unaccented without
↳whitespaces.
                        If "sn=Valérie DUPONT" then the returned value is "valeriedupont"
```

```
%us[0,4]|sn%      a substring of "Last name" field, taking 4 characters, starting at
↳position 0 and converting in uppercase.
                  If "sn=Valérie" then the returned value is "VALÉ".
```

```
%ls[1,4]|sn%      a substring of "Last name" field, taking 4 characters, starting at
↳position 1 and converting in lowercase.
                  If "sn=Valérie" then the returned value is "alér".
```

```
%las[4]|sn%       a substring of "Last name" field, taking the first 4 characters and
↳converting in unaccented lowercase.
                  If "sn=Valérie" then the returned value is "vale".
```

```
%r[8,8,1]u|%      a random string of length 8, containing uppercase letters.
```

1.11 Triggers

FusionDirectory Triggers

1.11.1 Functionalities

All plugins can run external scripts when an action is triggered for creating, modifying or deleting. You can use pre and post events depending when you want to run the script.

Pre triggers

- **precreate** : Execute the script before creation.
- **premodify** : Execute the script before editing.
- **preremove**: Execute the script before removing.

The trigger works well and does not display information if it returns 0 On error, prevents save and displays error.

Post triggers

- **postcreate** : Execute the script after creation.
- **postmodify** : Execute the script after editing.
- **postremove** : Execute the script after removing.

The trigger works well and does not display information if it returns 0 On error, displays command output.

Check triggers

- Execute the script in the check step (before saving), if it outputs anything, prevent save and show output as an error.

The trigger is considered to have passed if it returns 0 and does not display any message. (If it outputs anything it appears as a check failure, if it returns anything other than 0 it is considered a script error, for instance if the script was not able to do the check for some reason).

LDAP attributes

You can use ldap attributes as command line options. See *Macros*.

LDAP arrays

If you put a var that is an array in the args of the trigger, gosaAlternateMailAddress for instance, only the first value will be returned unless you use *Array modifiers*.

Special variables

- **%callerDN%** gives the DN of the author of the modification
- **%callerCN%** gives the CN of the author of the modification
- **%callerUID%** gives the UID of the author of the modification
- **%callerSN%** gives the SN of the author of the modification
- **%callerGIVENNAME%** gives the GIVENNAME of the author of the modification
- **%dn%** gives the dn of the modified object
- **%location%** gives the name of the location of the LDAP
- **%modifiedLdapAttrs%** lists the attributes modified by the modification (this is an array, see *Array modifiers*)

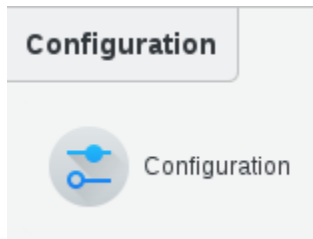
On users you get these extra variables available:

- **%userPassword%** to get password hash
- **%passwordMethod%** to get password method (usually ssh)
- **%passwordClear%** to get clear password
- **%userLocked%** to get user lock status (0 or 1)

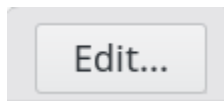
1.11.2 Configuration

- How you can use a trigger

You can access to triggers management via the ‘Configuration’ icon or entry in the ‘Addons’ section of the main page of FusionDirectory



Access is read-only. If you need to make changes, then you must press the ‘Edit’ button at the bottom right of the window.



In Triggers section you can define all your triggers

Tab	Mode	Deactivated	Command
user	postcreate	no	sudo /usr/local/sbin/fd-userCheckHookSendMail.sh %dn% %fdPrivateMail% %givenName% %sn% %uid% %callerGIVENNAME% %callerSN% %passwordClear% %nbCheckErrors%

Triggers

Tab*

Mode*

Deactivated*

Command*

Add

- **Display trigger output** : when enabled succesful trigger execution output is displayed to the user using a dialog
- **Triggers** : triggers that are called when specific actions happens
- **Tab** : the tab that this trigger concerns (required)
- **Mode** : when to call this command (required)
- **Deactivated** : use this to temporarily deactivate a trigger (required)
- **Command** : the command that will be called (required)

The line :

```
sudo /usr/local/sbin/fd-userCheckHookSendMail.sh %dn% %fdPrivateMail% %givenName% %sn
↳ % %uid% %callerGIVENNAME% %callerSN% %passwordClear% %nbCheckErrors%
```

Note: The arguments are automatically escaped and surrounded by quote so you may not use quote in command.

This will generate an automated e-mail like this :

```
Hello bilbo the hobbit,

Your account hbilbo has been created with password "vegOtNubraw7"

Please follow the next steps:

- Go to https://acme.fusiondirectory.org/
- Modify your password.
- Fill your infos if you want
- You can access the gitlab at https://gitlab.fusiondirectory.org

Enjoy,

FusionDirectory's Team
```

1.11.3 Most frequent mistakes

Nothing happens, the script seems not to be called

- Check the sudoers entry for the webserver user (www-data, wwwrun, ..) and don't forget to use "NOPASSWD"
- Try to run the script as webserver user, use the complete command used in fusiondirectory configuration(/usr/bin/sudo ...).

- Ensure that you have placed the post event correctly in the fusiondirectory configuration.

Example

```
%www-data ALL=(ALL:ALL) NOPASSWD:/usr/local/bin/hook.sh
```

1.12 Faq

FusionDirectory Frequent asked Questions

1.12.1 Acls Issues

- How can I let a person do administrative tasks under a specific department?

FusionDirectory implements a flexible but complex ACL management, please have a look at the following wiki page: FusionDirectory Acls

- How can I permit users to change some of their own attributes?

FusionDirectory implements a flexible but complex ACL management system, please have a look at the following wiki page: FusionDirectory Acls

Additionally you have to check the option 'Apply this acl only for users own entries'.

- How can I disable ACLs in case of misconfiguration?

The **ignoreAcl** value tells FusionDirectory to ignore complete ACL sets for the given DN. Add your DN and you'll be able to restore accidentally dropped ACLs.

You need to add **ignoreAcl** in the main section of your **fusiondirectory.conf** like in this exemple :

```
<main default="default">
  <!-- ... -->
  ignoreAcl="put_the_desired_dn"
  <!-- ... -->
</main>
```

1.12.2 Migrations issues

- After installing FusionDirectory using an existing LDAP tree, my user accounts are not listed.

You need to add the following objectClasses to your accounts:

```
objectClass: person
objectClass: organizationalPerson
```

if you follow the fusiondirectory web setup those accounts will be migrated automatically

1.12.3 Administrators issues

- I can't logon as Administrator, what is wrong ?

It looks like you are missing an fusiondirectory administrative account.


```
fusiondirectory-setup --check-ldap
```

1.13 Bug report

1. *Welcome*
 2. *Code of Conduct*
 3. *I just have a question!*
 4. *How Can report a bug / feature missing ?*
 - *Finding Wonderful Bugs*
 - *Any Feedback To Enhance Our Apps*
-

1.13.1 Welcome

«Here's a list of our guidelines, If you want to share a best practice, or think one of these guidelines should be removed, feel free to share it with us.»

First off, thanks for taking the time to report bug and missing features !

Now, sit comfortably at the fireplace, grab your glasses and immerse yourself in our documentation.

1.13.2 Code Of Conduct

All projects and everyone participating in it is governed by FusionDirectory *Code of Conduct*

By participating, you are expected to uphold this code. Please read this before.

1.13.3 I just have a question!

Note: Please don't file an issue to ask a question. You'll get faster results by using the resource below.

We have an various channel of communications

- [#fusiondirectory](#), the irc channel of FusionDirectory on freenode, channel #fusiondirectory
- [FusionDirectory Users mailing list](#)
- [FusionDirectory dev mailing list](#)

1.13.4 Reporting bug or missing features

Register for a FusionDirectory project account

To create a FusionDirectory project Account you must go to

- [FusionDirectory Sign UP](#)

Put FusionDirectory in debug mode

- Go into FusionDirectory configuration
- Activate the displaying of PHP errors, and the TRACE debug level

Finding Wonderful Bugs

Note: This section guides you through submitting a bug report. Following these guidelines helps maintainers and the community understand your report, reproduce the behavior, and find related reports.

When you are creating a bug report, please include as many details as possible. Fill out the **Bugs** template to create issues, the information it asks for helps us resolve issues faster.

Explain the problem and include additional details to help maintainers reproduce the problem:

- **Use a clear and descriptive title** for the issue to identify the problem.
- **Describe the exact steps which reproduce the problem** in as many details as possible. For example, start by explaining which browser and its version. When listing steps, don't just say what you did, but explain how you did it. For example, if you moved the cursor to the end of an input, explain if you used the mouse, or a keyboard.
- **Describe the behavior** you observed after following the steps and point out what exactly is the problem with that behavior.
- **Explain which behavior** you expected to see instead and why.
- **Include screenshots and animated GIFs** which show you following the described steps and clearly demonstrate the problem. You can use [this tool](#) to record GIFs on macOS and Windows, and [this tool](#) on Linux.
- **Include the PHP errors and trace** collected at the debug step above
- **If the problem is linked to a specific LDAP entry** attach its LDAP dump.

Fill in a report on :

- [FusionDirectory](#) for the core program
- [FusionDirectory Plugins](#) for plugins.

Any Feedback To Enhance FusionDirectory

Note: This section guides you through submitting an enhancement suggestion, including completely new features and minor improvements to existing functionality. Following these guidelines helps maintainers and the community understand your suggestion and find related suggestions.

When you are creating an enhancement report, please include as many details as possible. Fill out the **Enhancement** template to create those issues, the information it asks for helps us resolve issues faster.

- [FusionDirectory](#) for the core program
- [FusionDirectory Plugins](#) for plugins.
- **Use a clear and descriptive title** for the issue to identify the suggestion.
- **Provide a step-by-step description of the suggested enhancement** in as many details as possible.
- **Describe the current behavior** and **explain which behavior you expected to see instead** and why.

- **Include screenshots and animated GIFs** which help you demonstrate the steps which the suggestion is related to. You can use [this tool](#) to record GIFs on macOS and Windows, and [this tool](#) on Linux.
 - **Explain why this enhancement would be useful** to most FusionDirectory users.
-

This document is strongly inspired by the following resources: [ovh-ux-guidelines](#), [project-guidelines](#), [Atom Guidelines](#), [Angularjs guidelines](#).

With love

1.14 Release Policy

This section explain the release cycle and where contributions, fixes will be merged

1.14.1 FusionDirectory Version policy

Versioning

FusionDirectory can have 3 digits at maximum in a version : **X.Y.Z**

Z version increments (X.Y.Z1 → X.Y.Z2, for example 1.2.1 to 1.2.2) are minor bug fix only releases.

Y or **X** version increments are major releases (X.Y1.Z → X.Y2.Z, for exemple 1.1 to 1.2) are major releases.

Major Release

- Can contain any type of bugfix, new features and code refactor.
- Can remove attributes or objectclasses from the schema only if they were declared OBSOLETE in the previous major release.
- Can put **OBSOLETE** attributes and classes which are no longer used by the code.
- Two 2 major releases are needed before removing OBSOLETE attributes and objectClass.
- Can provide migration scripts in fusiondirectory-setup if needed for those, and/or migration instructions in the documentation.
- Have to provide migration instruction from previous major release.

Minor release

Minor release are small releases containing only bugfix to the last major release. It should be numbered with 3 digits.

Minor release **cannot** contain :

- Schema changes
- New features
- Code refactor
- Poorly tested code
- Changes which may break existing plugins or themes for previous release (or scripts based on the webservice)

Minor release contain :

- **bugfix** : should fix a bug observed in a previous release, something which did not work as intended.

Exceptions can be made :

- New feature can be included if it does not require any schema change and does not interfere with existing features
- Code refactor can be included if it leads to a significant performance gain and is thoroughly tested
- New plugin may be added if it does not require schema change (but it can add new schemas as this is non-intrusive)

Minor release must be released as soon as possible when :

- Security breach is found in the last stable release
- Regression (a bug which was not there in previous releases) is found in the last stable release
- Major bug is found in the last stable release

1.14.2 FusionDirectory Life Cycle

A maintained version is a **major** version for which we release **minor** bug fix releases and communicate about security vulnerabilities.

Our general support policy is to maintain major releases until **12 months** after the next major version is released to give some time for upgrading.

1.15 License

1.15.1 License

FusionDirectory is available under the [GNU General Public License 2.0](#)

FusionDirectory documentation is under the [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#)

Contents:

2.1 What is schema2ldif ?

`Schema2ldif` provides a solution to the conversion and management of schema inside an `OpenLDAP` directory.

`OpenLDAP` since version 2.4 has a backend named `cn=config` where everything is stored in `ldif` format including schemas.

Schemas must therefore be converted from schema format to `ldif` format to be inserted in the directory, you must also be able to update, delete, add schemas during the life of your directory.

To simplify all these operations we have written two utilities that can be used by everyone, including those that would not use `FusionDirectory`.

- `ldap-schema-manager`: list, insert, modify, insert diagrams
- `schema2ldif`: which converts your schemas to `ldif`

2.2 Prerequisites

`Schema2ldif` is a shell application that will need:

- perl 5;
- `ldap` command line tools;

2.3 Install Schema2ldif

Install `Schema2ldif`

2.3.1 Getting the official GPG keys to active package signature

Our packages for Debian and Centos/RHEL are signed with the official gpg key of the project.

Getting the new official gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xD744D55EACDA69FF  
  
gpg --export -a "FusionDirectory Project Signing Key <contact@fusiondirectory.org>" > FD-archive-key
```

Getting the development gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xADD3A1B88B29AE4A  
  
gpg --export -a "FusionDirectory Packagers <fusiondirectory-packages@lists.fusiondirectory.org>" > FD-archive-dev-key
```

Adding the key to apt for Debian/Ubuntu

```
apt-key add FD-archive-key
```

Adding the key to RPM for Centos / RHEL / Scientific Linux

```
cp FD-archive-key /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY  
  
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

2.3.2 Debian Repository

Debian Stretch

To use the latest published version for **stretch** put this in your `/etc/apt/sources.list`

```
#fusiondirectory extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-stretch stretch main
```

Debian Jessie

To use the latest published version for **jessie** put this in your `/etc/apt/sources.list`

```
#fusiondirectory extra repository  
deb http://repos.fusiondirectory.org/fusiondirectory-extra/debian-jessie jessie main
```

2.3.3 RPM Repository

A repository is available for Centos7

CentOS 7 / RHEL 7

To use the latest published version put this

```
[fusiondirectory-extra]
name=Fusiondirectory Extra Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/fusiondirectory-extra/rhel7/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

2.3.4 Downloading the source

The source download area is here

<https://repos.fusiondirectory.org/sources/>

2.3.5 Install Schema2ldif on Debian

Install schema2ldif

Installing Dependencies

All The needed dependencies are resolved by the debian packages

Note: The repositories are in https for Debian so you will need to install **apt-transport-https**

Install the Schema2ldif Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your Debian version

Debian Stretch

Debian Jessie

Create one new *.list* file fusiondirectory-extra with your favorite text editor in */etc/apt/source.list.d*

Install Schema2ldif

You can then install schema2ldif by running:

```
apt-get install schema2ldif
```

2.3.6 Install Schema2ldif on Centos

Install Schema2ldif

Installing Dependencies

Install the FusionDirectory Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your centos version

RPM Repository

Create one new repo file for fusiondirectory-extra with your favorite text editor in */etc/yum.repos.d/*

Install Schema2ldif

You can then install schema2ldif by running:

```
yum install -y schema2ldif
```

2.4 ldap-schema-manager

2.4.1 Description

This program will list, insert, empty or modify the ldap schemas into the ldap server.

2.4.2 Functionalities

How it works

List schemas already installed :

```
ldap-schema-manager -l
```

Insert a new schema :

```
ldap-schema-manager -i /path/to/your/file.schema
```

If a schema of the same name is already present the insertion will fail. If the file doesnt have a .schema extension added to the name, ldap-schema-manager will add .ldif

Update a schema :

```
ldap-schema-manager -m /path/to/your/file.schema
```

If a schema of the same name is not present the update will fail.

Empty a schema :

```
ldap-schema-manager -e schema_name
```

Warning: This will clean the schema but it stay inside your ldap server in de cn=schema,cn=config. It's impossible right now to remove a node from cn=schema,cn=config. ldap-schema-manager provide this solution to be able to remove a schema without stopping the ldap server, but the schema will still be listed by running -l.

Note: The conversion is done by schema2ldif. The only constraint is that the schema first list attributes then object-class, which is the case in all the standard schema we saw.

Note: If you want to insert again a schema emptied by -e, you should use -m and not -i.

2.5 Schema2ldif

2.5.1 Description

Schema2ldif will read the given input file and convert it to an LDIF file that you can insert into your LDAP directory.

2.5.2 Functionalities

```
schema2ldif <options> <FILE> > file.ldif
```

How it works

convert a schema :

```
schema2ldif cosine.schema > cosine.ldif
```

the name of the file (without extension) will be used as cn.

options :

-c

Use CN as cn for the schema (mandatory if no file provided)

-b

Use BRANCH instead of cn=schema,cn=config

Note: If <FILE> is not provided, it will read from standard input. In this case, the -c option is mandatory.

2.6 License

Schema2ldif is available under the [BSD 3 Clause](#)

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CHAPTER 3

Argonaut



3.1 What is Argonaut ?

Argonaut is the companion of FusionDirectory , its goal is to allow the management of services and integrate the deployment system(s) from FusionDirectory.

3.1.1 Features

Argonaut is composed of a client **Argonaut Client** and a server **Argonaut Server**

Both client and server sides can load modules at start, those modules are strongly related to a FusionDirectory plugin.

Modules can be classified into three categories :

- FusionDirectory integration
- argonaut-user-reminder to manage the account reminder plugin of FusionDirectory
- argonaut-clean-audit to clean the audit branch of FusionDirectory
- Services management
- argonaut-ldap2zone: update a dns zone, create view, create acls for Bind
- argonaut-quota: apply a quota
- argonaut-dovecot: create the mailbox quota and applies it Dovecot
- argonaut-fuse : create on the fly pxelinux.cfg file that matches the type of machine to be deployed, allowing automatic boot during an install by pxe
- Integration with deployment tools
 - FAI
 - argonaut-fai-nfsroot : Tools, queues and status management for FAI (Fully Automated Install) installations.
 - argonaut-fai-mirror: create a synchronization script Mirror of debian or RPM packages
 - argonaut-fai-monitor: follow FAI installation and report states to FusionDirectory
 - argonaut-fai-server : Argonaut server module to manage FAI
 - OPSI
 - argonaut-server-module-opsi : queues, profiles management

3.2 Install Argonaut

Install Argonaut

3.2.1 Getting the official GPG keys to active package signature

Our packages for Debian and Centos/RHEL are signed with the official gpg key of the project.

Getting the new official gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xD744D55EACDA69FF
gpg --export -a "FusionDirectory Project Signing Key <contact@fusiondirectory.org>" >_
↪FD-archive-key
```

Getting the development gpg key

```
gpg --keyserver keys.gnupg.net --recv-key 0xADD3A1B88B29AE4A
gpg --export -a "FusionDirectory Packagers <fusiondirectory-packages@lists.
↪fusiondirectory.org>" > FD-archive-dev-key
```

Adding the key to apt for Debian/Ubuntu

```
apt-key add FD-archive-key
```

Adding the key to RPM for Centos / RHEL / Scientific Linux

```
cp FD-archive-key /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

3.2.2 Debian Repository

Debian Stretch

To use the latest published version for **stretch** put this in your `/etc/apt/sources.list`

```
#fusiondirectory repository
deb https://repos.fusiondirectory.org/argonaut-current/debian-stretch/ stretch main
```

```
#fusiondirectory extra repository
deb https://repos.fusiondirectory.org/argonaut-extra/debian-stretch/ stretch main
```

3.2.3 RPM Repository

A repository is available for Centos7

This repository contains the stable version of Argonaut. It also contains the extra packages needed to use Argonaut.

To use the latest published version put this in your yum config :

CentOS 7 / RHEL 7

To use the latest published version put this

```
[argonaut]
name=Argonaut Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/argonaut-current/rhel7/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

```
[argonaut-extra]
name=Argonaut Extra Packages for RHEL / CentOS 7
baseurl=http://repos.fusiondirectory.org/argonaut-extra/rhel7/RPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

SRPMS are also available in the following repo :

```
[argonaut-src]
name=Argonaut Packages for RHEL / CentOS 7
baseurl=https://repos.fusiondirectory.org/argonaut-current/rhel7/SRPMS/
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-FUSIONDIRECTORY
```

3.2.4 Downloading the source

The source download area is here

<https://repos.fusiondirectory.org/sources/>

3.2.5 Install Argonaut on Debian

Install FusionDirectory

Installing Dependencies

All The needed dependancies are resolved by the debian packages

Install the Argonaut Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your Debian version

debian-repository-stretch-label

debian-repository-jessie-label

Create 2 new *.list* file your favorite text editor in */etc/apt/source.list.d*

- One for argonaut
- One for argonaut-extra

Install Argonaut

You can then install FusionDirectory by running:

```
apt-get install argonaut-common
```

3.2.6 Install Argonaut on Centos

Install FusionDirectory

Installing Dependencies

Argonaut requires the [EPEL](#) repository

- To install epel

```
yum install epel-release
```

Install the FusionDirectory Repos

To easily install the latest version, you can install the fusion directory repos

Chose the repositories that goes with your centos version

rpm-repository-centos7-label

Create 2 new repo file your favorite text editor.

- One for argonaut
- One for argonaut-extra

Install Argonaut

You can then install Argonaut by running:

```
yum install -y argonaut-common
```

3.3 Configure Argonaut

Argonaut use a global configuration file that is used by all programs : **/etc/argonaut.conf**. This file is composed of various sections, all sections are filled with correct basic values.

Note: To function correctly Argonaut need a correctly configured **/etc/ldap/ldap.conf** or **/etc/openldap/ldap.conf**

3.3.1 Argonaut configuration files section

[server]

This section contains all the argonaut server parameters :

```
server_ip = 172.16.0.1
```

The ip address the server listen to. This address must match with the MAC address of argonaut server provided in FusionDirectory interface.

[client]

This section contains all the argonaut server parameters :

```
client_ip = 172.16.0.1
```

The ip address the server listen to. This address must match with the MAC address of argonaut server provided in FusionDirectory interface.

[ldap]

This section contains all the ldap parameters :

```
config = /etc/ldap/ldap.conf
```

Where is stored your ldap.conf configuration file.

```
dn = cn=admin,dc=fusiondirectory,dc=org
```

What is your bind dn.

```
password = secret
```

What is the password for the provided bind dn.

```
tls = off
```

whether communication should be encrypted or not

[rest]

This section contains all the REST API parameters :

```
endpoint = https://example.com/fusiondirectory/rest.php
```

Where is the fusiondirectory webservice endpoint

```
login = bmortier
```

Which user is authorized to connect to the FusionDirectory webservice, this is not a full dn.

```
password = password
```

This user will need to be given to correct access with FusionDirectory acl to perform the action requested.

3.4 Applications

3.4.1 Argonaut Components

Global components

Argonaut Libraries

- argonaut-common : main argonaut library (LDAP, package management)
- argonaut-common-fai : FAI library needed by various FAI components of Argonaut

Argonaut Server and Client

- argonaut-server : server that receive orders from FusionDirectory (interact with clients in JSON RPC)
- argonaut-client : client to interact with argonaut-server
- argonaut-fuse : FUSE tftp component that manage pxelinux.cfg directory and create files for PXE boot from LDAP

Argonaut Modules

- argonaut-server-module-fai : FAI module for argonaut-server, it add FAI deployment functions
- argonaut-server-module-opsi : OPSI module for argonaut-server, it add OPSI deployment functions
- argonaut-fuse-module-fai : FAI module for argonaut-fuse, create files for PXE boot from LDAP for FAI
- argonaut-fuse-module-opsi : OPSI module for argonaut-fuse, create files for PXE boot from LDAP For OPSI
- argonaut-dovecot : Dovecot module that create users directories for the mailbox from FusionDirectory

Argonaut Applications

- argonaut-ldap2zone : tool that create bind files with information from FusionDirectory
- argonaut-quota : tool that grab quota information from FusionDirectory and create it on the system
- argonaut-samba : program to create samba share from FusionDirectory
- argonaut-fusiondirectory : program that complement a plugin in FusionDirectory, currently has **argonaut-user-reminder** and **argonaut-clean-audit**

Debian components

- argonaut-fai-server : package to install on FAI server (not in NFSROOT)
 - argonaut-fai-monitor : grab installation status from FAI and send it to argonaut-server (need argonaut-client)
 - fai2ldif : tool that convert FAI classes in LDIF that we can insert in LDAP
- argonaut-fai-nfsroot : integration package for FAI NFSROOT
 - argonaut-ldap2fai : create FAI classes in /var/lib/fai/config from LDAP

- get-config-dir-argonaut : LDAP method for FAI
- argonaut-fai-mirror
 - argonaut-repository : create script to update local mirrors (cron.daily) that are in FusionDirectory
 - argonaut-debconf-crawler : extract debconf from packages in a distant repository

Centos components

- argonaut-fai-monitor : grab installation status from FAI and send it to argonaut-server (need argonaut-client)
- yumgroup2yumi : convert yumgroups into yumi in a ldif file so it can be imported into FusionDirectory FAI management interface

3.4.2 User-Reminder

Argonaut User-Reminder

Description

The user-reminder application is used to send mail to users warning that the account will expire and provide a way of extending it if needed

Installation

Install packages

Debian

```
apt-get install argonaut-fusiondirectory
```

RHEL

```
yum install argonaut-fusiondirectory
```

Functionalities

The user-reminder application is used to send mail to users warning that the account will expire and provide a way of extending it if needed

You will need the user-reminder plugin installed into FusionDirectory to make it work

How it works

Argonaut-user-reminder look at different source (posix, ppolicy, supann) and can send a mail or make the account expire

The arguments are the following:

- `-help`
- `-verbose`
- `-posix`
- `-ppolicy`
- `-supann`
- `-all` (posix, ppolicy and supann)
- `-supann-update` (maintain the supann workflow through webservice it need the REST configuration in `argonaut.conf`)

Depend on which source you want to use you also need the FusionDirectory plugin that match (posix, ppolicy, supann)

You run `argonaut-user-reminder` in a cron so that it keep all the informations updated

Examples

```
# Expiration for all
argonaut-user-reminder --verbose --all
# Expiration for ppolicy
argonaut-user-reminder --verbose --ppolicy
# Expiration for posix
argonaut-user-reminder --verbose --posix
# Expiration for supann
argonaut-user-reminder --verbose --supann
# Maintain supann workflow through webservice
argonaut-user-reminder --verbose --supann-update
```

3.5 Contribute

There is a complete set of guidelines that you should read

[Contributing to Argonaut](#)

[Develop with Argonaut](#)

3.6 License

FusionDirectory is available under the [GNU General Public License 2.0](#)

FusionDirectory documentation is under the [Creative Commons Attribution-ShareAlike 4.0 International \(CC BY-SA 4.0\)](#)

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FusionDirectory Support Options

4.1 Professional paid support

FusionDirectory helps you keep FusionDirectory running smoothly

Why choose FusionDirectory ?

- You are the publishers of FusionDirectory.
- We have over 16 years experience in the support of LDAP directories and applications directory management.
- We support and maintains OpenLDAP architectures for various entities from small to very big on a daily basis
- We maintain and develop the [PHP LDAP](#) module

You are sure to get :

- Answers to your questions about FusionDirectory by phone, email or web,
- Packages containing bug fixes between two stable versions
- Assistance for the development of FusionDirectory modules tailored to your needs,
- Assistance on the update of FusionDirectory
- A technician on site if the situation requires.

Support Options :

- Get [support for your FusionDirectory](#) instance
- Get [training for your daily use](#) of FusionDirectory
- Get [support on specialized plugins](#) of FusionDirectory

4.2 Community support

For any question regarding FusionDirectory support (installation, configuration, usage, etc. . .), the preferred way to get some support is through the [mailing list](#) or [irc](#).

5.1 Digital signature

Our official packages for Debian and Centos/RHEL are signed with the official gpg key of the project.

5.1.1 Official gpg key

```
pub  rsa4096/0xD744D55EACDA69FF 2017-07-02 [SC] [expire : 2022-07-01]
     A94DE63F2EDB5F0DC0785EBBD744D55EACDA69FF
uid  [ totale ] FusionDirectory Project Signing Key
     ↪<contact@fusiondirectory.org>
```

Our official development packages for Debian and Centos/RHEL are signed with the official development gpg key of the project.

5.1.2 Development gpg key

```
pub  rsa2048/0xADD3A1B88B29AE4A 2014-02-25 [SC]
     8ABF887BF6254D6F57B82069ADD3A1B88B29AE4A
uid  [ totale] FusionDirectory Packagers <fusiondirectory-
     ↪packages@lists.fusiondirectory.org>
```

5.2 Security issues

If you find a security issue inside FusionDirectory you can report it to directly to security team security@fusiondirectory.org.

you can sign your message with the public key from

Benoit Mortier 0xEF2FF1E48638EAD1

This is the alphabetical list of all people that have contributed to the FusionDirectory project, beeing code, translations, documentation and additional help.

As FusionDirectory is originaly a fork from GOsa² you also have a list of GOsa² Contributors

6.1 Original GOsa² AUTHORS

This is the alphabetical list of all people that have contributed to the original GOsa² project before the fork to FusionDirectory

- Markus Amersdorfer <der.plusch@subnet.at>
 - Wiki setup, Testing, hints, proposals
- Alessandro Amici <a.amici@bopen.it>
 - Italian translation
- Craig Chang <craig0310@gmail.com>
 - Fixes for magic_quotes_gpc
- Guillaume Delecourt <guillaume.delecourt@opensides.be>
 - Setup fixes, nagios tab plugin, xls addons ldapmanager
 - ptp connectivity option, phpscheduleit connectivity option
- Alejandro Escanero Blanco <aescanero@chaosdimension.org>
 - Fixes, improvements, translation, netgroup plugin, Guide and some extensions
- Fabian Hickert <hickert@gonicus.de>
 - Improvements for setup, various fixes and plugins
- Niels Klomp <nk@careworks.nl>

- Dutch translation
- Steve Moitozo <god at zilla dot us>
 - Password checker
- Benoit Mortier <benoit.mortier@opensides.be>
 - Butracking, QA, French translation
- Igor Muratov <migor@altlinux.org>
 - Various fixes and speed enhancements
- Michael Pasdziernik <mp@secio.de>
 - Documentation for GOsa and safe-mode, fixes
- Cajus Pollmeier <pollmeier@gonicus.de>
 - Virtually everyting which is GOsa related
- Piotr Rybicki <meritus@innervision.pl>
 - Polish translation
- Henning Schmiedehausen <hps@intermeta.de>
 - Various fixes, support for user defined people/group base
- Alfred Schröder <schroeder@gonicus.de>
 - German translation
- Jan Wenzel <jan.wenzel@gonicus.de>
 - Implementation and research for samba munged dial support,
 - fixing of “Fiptehlers”(TM) in the german translations.
- Leila El Hitori <leila.elhitori@opensides.be>
 - French online documentation
 - English online documentation
- Vincent Seynhaeve <vincent.seynhaeve@opensides.be> * XIs export plugin
- Leonid Bogdanov <leonid_bogdanov@mail.ru>
 - patch for the manager fonctionnality in the General user tab
- Olivier BONHOMME <obonhomme@nerim.net>
 - Corrected RPM building

6.2 FusionDirectory AUTHORS

This is the alphabetical list of all people that have contributed to the FusionDirectory project, beeing code, translations, documentation and additional help.

- Benjamin Carpentier <carpentierbenjamin@gmail.com>
 - Tested FusionDirectory, corrected copyright issues and locales
 - Written fusiondirectory-setup
- Giuliano Di Vito <giuliano@opensides.be>

- Italian Translator and bug finder
- Roman Widmann <archme.mail@gmail.com>
 - Arch linux packager
- Bernigaud Côme <come.bernigaud@laposte.net>
 - New daemon code class_supportDaemon.inc, and all the new deployment stuff :)
 - Simple plugin framework developer
- Alexis Michon <alexis.michon@ibcp.fr>
 - Testing, First version of Password reset
 - Support for two or more MAC address for a system
- Mike Gabriel <mike.gabriel@das-netzwerkteam.de>
 - Various patches from debian-edu
 - Apache 2.4 support
 - Mcrypt decrypt enhancement
 - Browsing inactive tab
- Jeremy Williame <williamejeremy@hotmail.com>
 - Cleanup and writer of the FusionDirectory doxygen api documentation
- Rudy Hardeman <zarya@gigafreak.net>
 - Option to remove sambaLMpassword storage
- Feth Arezki <feth@majerti.fr>
 - First version of the autofs plugin
- Daniel B <daniel@firewall-services.com>
 - Cleanup of the sambaPwdMustChange, sambaPwdCanChange
- Regis patronix <regis.patroux@thecosmocompany.com>
 - Allow special characters in passwords
- Antoine Gallavardin <antoine.gallavardin@free.fr>
 - Add support for social network ORCID in personal
 - Dhcp plugin patch to manage key and update zone in dhcp for dyndns
 - First version of the quota plugin
 - First version of the supann plugin
 - First version of the board plugin
- Sergio Talens-Oliag <sto@iti.es>
 - Configuration setting to force the use of a hash when setting or changing passwords
 - Add support for crypt/sha-256 and crypt/sha-512
 - Use the passwordDefaultHash for new users
 - Fix for icons in core plugins
 - Provide a way to show hook execution results to the user via web

- Hide userPassword on change_password postmodify hook error message
- Stefan Krüger <shadow_7@gmx.net>
 - Add support for various database to the rsyslog plugin
- Guillaume Chéramy <guillaume@cheramy.name>
 - Patches for the template system
- Mathias Friman <mathias.friman@knorca.se>
 - Translation to swedish
- Alexandre Magnat <alexandre.magnat@mecaprotec.fr>
 - Snapshot bug reporter
- Guillaume RODRIGUEZ <rodriguez.guillaume@icloud.com>
 - asterisk plugin error reporter
- Guillard Olivier <fd@guillard.nom.fr>
 - SSH plugin key storage problem reporter
- Fabien Brachere <fabien.brachere@e-tera.com>
 - Fix support for special characters in password
- Arnaud Patard <apatard@hupstream.com>
 - Fix for Invalid uri in the password recovery mail
 - Fix for start tls on fusiondirectory setup and gnutls
- Adrian Reyer <are+fd@lihas.de>
 - Modifier for templates to convert german umlauts to 7-bit ASCII
- Samuel Bosquin <samuel.bosquin@ibcp.fr>
 - Plugin FAI - LVM partitions
- IOhannes umlaeute <noc@iem.at>
 - generateLdif() fails with bind-passwords containing '\$' patch
- Karsten Becker <karsten.becker@ecologic.eu>
 - Suse install from tarballs Documentation
- Felix Weissbeck <contact-fusiondirectory@w7k.de>
 - Method to add a change password dialog on sasl+kerberos
- Tobias Göbel
 - Fixes for PHP7 compatibility
- Christian Kreidl <christian.kreidl@ziti.uni-heidelberg.de>
 - ppolicy improvement
- Martin Hamant <mh@ow2.org>
 - Coded the LockUser fonction for the webservice
- Jonathan Swaelens <jonathan@opensides.be>
 - QA on FusionDirectory

- RPM packaging maintener and ArchLinux Packager
- [Timothée Giet <timo@timotheegiet.com>](mailto:timo@timotheegiet.com)
 - New breezy icon Theme
- [Clement Oudot <clem.oudot@gmail.com>](mailto:clem.oudot@gmail.com)
 - HTTP header authentication
 - Password expiration date in dashboard
- [Thomas Niercke <thomas@niercke.de>](mailto:thomas@niercke.de)
 - Code and ideas for making Argonaut Events Extensible
- [Paola Penati <paolapenati@hotmail.com>](mailto:paolapenati@hotmail.com)
 - Italian translation of FusionDirectory and the website
- [Martin Hamant <mh@ow2.org>](mailto:mh@ow2.org)
 - Adding DSA accounts into groups
- [Mathias Soupault <mathias.soupault@inalco.fr>](mailto:mathias.soupault@inalco.fr)
 - Making supannAliasLogin usage possible in password recovery
- [Patzke Thomas <thomas.patzke2@thyssenkrupp.com>](mailto:thomas.patzke2@thyssenkrupp.com)
 - Security and vulnerability testing
- [Janne Heß](#)
 - Enhance the login and password reset theme
- [Peter Linss](#)
 - Added catchall table to postfix plugin

6.3 FusionDirectory libraries

This is the alphabetical list of libraries and their authors that FusionDirectory is using

- [Dan Ellis <danellis@rushmore.com>](mailto:danellis@rushmore.com)
 - class_sieve.inc
- [Eric Kilfoil <eric@ipass.net>](mailto:eric@ipass.net)
 - ldap.inc
- [Thomas Schüßler <tulpe@atomar.de>](mailto:tulpe@atomar.de)
 - debuglib.inc
- [Wouter Verhelst <wouter@debian.org>](mailto:wouter@debian.org)
 - accept-to-gettext.inc
- [Steve Moitozo <god@zilla.us>](mailto:god@zilla.us)
 - pwdStrength.js
- [Roland Gruber](#)
 - class_smbHash.inc

- Knallgrau New Medias Solutions GmbH
 - pulldown.js
- Mathieu Jondet <mathieu@eulerian.com>
 - datepicker.js

CHAPTER 7

Contact Us

We are also contactable on:

- Mailing list: <https://lists.fusiondirectory.org/www/lists>
- IRC: #fusiondirectory on irc.freenode.org <irc://irc.freenode.org/fusiondirectory>

Follow Us

- On twitter: <https://twitter.com/fusiondirectory>
- On linkedin: <https://www.linkedin.com/company/fusiondirectory>

8.1 Our Pledge

In the interest of fostering an open and welcoming environment, we as contributors and maintainers pledge to making participation in our project and our community a harassment-free experience for everyone, regardless of age, body size, disability, ethnicity, gender identity and expression, level of experience, nationality, personal appearance, race, religion, or sexual identity and orientation.

8.2 Our Standards

Examples of behavior that contributes to creating a positive environment include:

- Using welcoming and inclusive language
- Being respectful of differing viewpoints and experiences
- Gracefully accepting constructive criticism
- Focusing on what is best for the community
- Showing empathy towards other community members

Examples of unacceptable behavior by participants include:

- The use of sexualized language or imagery and unwelcome sexual attention or advances
- Trolling, insulting/derogatory comments, and personal or political attacks
- Public or private harassment
- Publishing others' private information, such as a physical or electronic address, without explicit permission
- Other conduct which could reasonably be considered inappropriate in a professional setting

8.3 Our Responsibilities

Project maintainers are responsible for clarifying the standards of acceptable behavior and are expected to take appropriate and fair corrective action in response to any instances of unacceptable behavior.

Project maintainers have the right and responsibility to remove, edit, or reject comments, commits, code, wiki edits, issues, and other contributions that are not aligned to this Code of Conduct, or to ban temporarily or permanently any contributor for other behaviors that they deem inappropriate, threatening, offensive, or harmful.

8.4 Scope

This Code of Conduct applies both within project spaces and in public spaces when an individual is representing the project or its community. Examples of representing a project or community include using an official project e-mail address, posting via an official social media account, or acting as an appointed representative at an online or offline event. Representation of a project may be further defined and clarified by project maintainers.

8.5 Enforcement

Instances of abusive, harassing, or otherwise unacceptable behavior may be reported by contacting the project team at coc@fusiondirectory.org. All complaints will be reviewed and investigated and will result in a response that is deemed necessary and appropriate to the circumstances. The project team is obligated to maintain confidentiality with regard to the reporter of an incident. Further details of specific enforcement policies may be posted separately.

Project maintainers who do not follow or enforce the Code of Conduct in good faith may face temporary or permanent repercussions as determined by other members of the project's leadership.

8.6 Attribution

This Code of Conduct is adapted from the [Contributor Covenant](https://www.contributor-covenant.org/version/1/4), version 1.4, available at <https://www.contributor-covenant.org/version/1/4>

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