



One Year Solving Infrastructure Management with FusionDirectory and OpenLDAP

- **Manage heterogeneous infrastructures**
- **FusionDirectory**
- **Integration of external software**
- **Uses cases**

Manage heterogeneous infrastructures

- Today infrastructures are mixed, Windows, Linux, Mac, web applications
- Cloud services are becoming part of the stack
- A need for centralized management becomes necessary
- The multitude of tools makes management difficult

Current issues

- Ldap servers store more than users today
- We may delegate the work to people with different level of expertise
- We need an interface to organize and display the data
- We must be able to integrate data from various sources



































FusionDirectory

- **Philosophy**
- **User management**
- **Systems Management**
- **Acl system**

Philosophy

- An interface to manage everything.
 - Users, groups, roles, systems, services, deployment, external services
- The least intrusive integration.
 - It is FusionDirectory that adapt itself.
 - Integration with existing software unmodified.
- Extensive modularity.
 - A plugin by FusionDirectory service.
- External access
 - Webservice

FUSION DIRECTORY [Main](#) [Sign out](#) Welcome dufour paul! Signed in: admin

Users and groups Departments Users Groups and roles NIS Netgroups Aliases ACL roles ACL assignments Supann structures Sudo EJBCA DSA Applications	Users and groups  Departments  Users  Groups and roles  NIS Netgroups  Aliases  ACL roles  ACL assignments  Supann structures  Sudo  EJBCA  DSA  Applications
Systems Systems DNS Auto fs FAI Debconf Repository management OPSI Deployment queue Samba domains SOGo	Systems  Systems  DNS  Auto fs  FAI  Debconf  Repository management  OPSI  Deployment queue  Samba domains  SOGo
Configuration Configuration GPG server info LDAP import/export OPSI import	Configuration  Configuration  GPG server info  LDAP import/export  OPSI import
Reporting Dashboard Inventory objects Audit	Reporting  Dashboard  Inventory objects  Audit
My account User Unix Personal	My account  User  Unix  Personal  Mail  Samba

User management

- Creating users, groups and roles
- Creating Functional mail alias
- standard password management or based on ppolicy
- User templates, create pre configured users.
- Bulk import and creation with support for templates.
- Copy paste.
- Snapshots, restores entries after modification

Users

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Actions ▾

<input type="checkbox"/>	Surname ▾	Given 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	👤 🐧 🖥️ 📄	✂️ 📄 🖋️ 🗑️ 🔄 📄 📄

Filter

Show templates

Show functional users

Show POSIX users

Show Mail users

Show Samba users

Search in subtrees

🔍 Name

Apply filter

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Systems Management

- Creation of systems: servers, pc, terminals, mobile phone, network devices
- Automount map management
- Management of deployment tools: FAI, OPSI, Debconf
- Service Management: dhcp, dns, mail, package repositories, Argonaut

List of systems

Filter

< < > > Base / Actions ▾

<input type="checkbox"/>	Name ▾	IP	MAC	Description	Services	Release	Actions
<input type="checkbox"/>	acme	192.168.5.6					
<input type="checkbox"/>	android6						
<input type="checkbox"/>	demo-fixes	195.154.20.158					
<input type="checkbox"/>	windows7\$	192.168.1.5	ff.ff.ff.ff.ff				

1 1 1 1Apply filter

Search in subtrees

Integration of external software

- **The FusionDirectory hooks**
- **The FusionDirectory API**
- **FusionDirectory Webservice**
- **Argonaut: system management**

The FusionDirectory Hooks

- Hooks can be triggered in any FusionDirectory tabs
- We have Precreate, Postcreate, PreModify, PostModify, Check
- Precreate and Premodify can abort save if there is an error
- Hooks get attributes in the form %cn%
- Check mainly used to add validation when FusionDirectory doesn't do it

The FusionDirectory API

- Helps you to write new plugins
- Automatically creates the different components of the interface
- Automatically handles FusionDirectory ACL
- Easy to understand

The FusionDirectory Webservice

- Creates objects as you would in the interface
- Respects the FusionDirectory ACL and access rights
- supports functionalities like users models
- Easy to understand
- Based on json/rpc calls

The FusionDirectory Acl

- Acl are used to delegate :
 - Let HR create users
 - Let technicians manage systems
- Give rights on FusionDirectory attributes
- A FusionDirectory attribute is nearly always an LDAP attribute
- Rights are stored in roles :
 - Roles are applied on a base or subtree
 - Roles can be attributed to a users, groups
- Rights are create, delete on tabs levels, read/write on attributes level
- By default we have three roles availables:
 - Manager
 - Editownpassword
 - Editowninfos

Argonaut : system management

- Client / server modular system
- Server
 - Schedule tasks
 - Ensures client / server dialogue for long operations
 - Get back information to FusionDirectory
- Client
 - Run tasks requested by Argonaut server
 - Run tasks manually requested by the user
- Modules
 - FAI: Linux deployment
 - OPSI: Windows deployment
 - ldap2zone: dns zone management
 - Quota: manages quotas
 - Samba shares

Cas Concrets

- OW2
- Huma-num
- Abvent
- Inalco

OW2

ow2 is currently redesigning its whole infrastructure. FusionDirectory is used with its webservice.

- Create base user from xwiki in FusionDirectory via webservice
- Reset password from xwiki via FusionDirectory webservice
- Reminder of the user name from xwiki via FusionDirectory webservice

Huma-num

huma-num is deploying new software and was in need of a centralised interface to would allow local people to manage their entries but with central enforced management.

- Heavy use of template and acl to make branch manager autonomous while constraint by upper management
- Audit plugin created by us to audit every change inside FusionDirectory
- User reminder to send mail when account expires and ask for renewal with making local manager aware of it

Abvent

Abvent is using google apps and needed a way to synchronize those accounts with an internal ldap server to give access to share management and so on.

- Use the webservice to get the data from goggle apps and automatically create the user account
- Create or Update user if needed with posix, samba, mail accounts

Inalco

inalco needed his Idap server to be Supann compliant and also wanted students to be able to change easily passwords, mobile phone number and emails.

- Workflow with Isc to import Supann data from the french education ministry databases
- FusionDirectory ACL to allow student to change passwords, mobile phone and emails
- CAS integration to make FusionDirectory SSO aware
- DHCP and DNS for technician to create systems and directly make them appear in the dhcp and dns servers

- **FusionDirectory important urls**

<https://www.fusiondirectory.org>

<http://demo.fusiondirectory.org>

<https://www.argonaut-project.org/>

<https://gitlab.fusiondirectory.org/fusiondirectory>

<http://documentation.fusiondirectory.org>

irc #fusiondirectory on freenode

- **My contact**

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