Installation and Administration Guide

Version 1.4

To use with OCS Inventory NG Release Candidate 2 or higher

OpenSource, Web enabled Inventory System
http://ocsinventory.sourceforge.net

Table of Contents

History and changes

Version	Date	Author	Comments
1.0	2005-06-22	Didier LIROULET	Creation
1.1	2005-08-18	Didier LIROULET	Updates for management server installation on Linux considering the version of mod_perl and for management server installation on Windows, ipdiscover feature.
1.2	2005-09-05	Didier LIROULET	Updates for IP Discover utility, and agent including monitor serial number detection, force not using proxy or force using HTTP port other than 80. Added chapter for common errors.
1.3	2005-12-03	Didier LIROULET	Updates for NG 1.0 RC 1. Deployment of Windows Agent 4010 requires use of OcsLogon. Linux agent v8 requires PERL module Net::IP and update of ipdiscover module. Subnets are now managed in database (not in file subnet.csv). Upgrade of Windows Server requires reinstall.
1.4	2006-02-16	Didier LIROULET	Updates for NG 1.0 RC2. Add of software dictionary. LSB compliance in Linux agent. Upgrade fix in OCS NG Server for Windows installation.

1 Introduction.

Open Computer and Software Inventory Next Generation is an application designed to help a network or system administrator keep track of the computer configuration and software installed on the network.

Dialog between client computers and management server is based on actual standards, HTTP protocol and XML data formatting.

Management server runs on Apache/MySQL/PHP/PERL server, under Linux or Windows NT based computers.

Inventoried client computers can run Microsoft Windows 95/98/Me/NT4/2000/XP/2003 or Linux operating systems.

OCS Inventory is GPL software, i.e. free to use & copy (see the GPL or http://www.opensource.org). OCS Inventory is also Open Source! This means if you want to modify the sources you can! But if you want update the source code to distribute it, you must provide your updates under GPL license terms.

OCS Inventory supports the following languages:

- ✓ Brazilian Portuguese
- ✓ English
- ✓ French
- ✓ German
- ✓ Italian
- ✓ Portuguese
- ✓ Spanish

Used with park management software such as GLPI (http://glpi.indepnet.org/), you will have a powerful inventory and park management software with automatic updates of computer configuration, license management, help desk and more.

2 Important notes

OCS Inventory NG 1.0 RC2 includes most of requested features, and a lot of bug fixes (See "changelog" or "readme" of each packages).

But also, take care about the following points.

OCS Inventory NG Server for Linux.

- All previous packages for Communication Server, Administration Server and IPDISCOVER-UTIL perl script are included in OCSNG_LINUX_SERVER package, since 1.0 RC1.
- Administration Server now requires ZIP support for PHP to be enabled.
- IPDISCOVER-UTIL perl script uses Net::IP perl module, instead of Inline.pm module, since 1.0 RC1.

OCS Inventory NG Server for Windows.

- Based on XAMPP 1.5.0 pl1, since 1.0 RC1, instead of 1.4.14.
- Upgrade from previous version is now easy, read § 3.2.4 Upgrading management server.

OCS Inventory NG Agent for Windows, internal version 4014.

- Deployment can be done using launcher OcsLogon.exe, manually or using automatic upgrade feature. You cannot use automatic deployment feature if you're upgrading from any beta release (version 4.0.1.0 or previous).

OCS Inventory NG Agent for Linux, internal version 11.

- Requires Net::IP perl module since 1.0 RC1. Use automatic deployment feature carefully. If Net::IP is not setup on client computer, agent will not work !
- Includes new release of "ipdiscover" binary file. See § 4.2.
- Agent perl script has been renamed "ocsinventory-client.pl". File name does not more include version.
- Cron script is no more in "/etc/cron.daily" directory, but in "/etc/cron.d" directory. This allows customizing launch hour to distribute connections to Communication server during the entire day.
- To be compliant with LSB 2.0, binaries of agent are no more in "/etc/ocsinventory-client" directory. Perl script "ocsinventory-client.pl" and "ipdiscover" binary are now setup in "/usr/sbin" directory. If "dmidecode" is not setup on computer, installer put it in "/usr/sbin" directory.

So, this agent cannot be deployed through automatic upgrade feature. It can only be deployed manually using the installer.

3 Setting up management server.

Management server contains 3 mains components:

1. Database server, which store inventory information
2. Communication server, which will handle HTTP communications between database server and agents.
3. Administration server, which will allow administrators to query the database server through their favorite browser.

These 3 components can be hosted on a single computer or on different computers to allow load balancing. For more than 5000 inventoried computers, it's better to use at least 2 different servers, one for the database server and the other for the Communication server and Administration server.

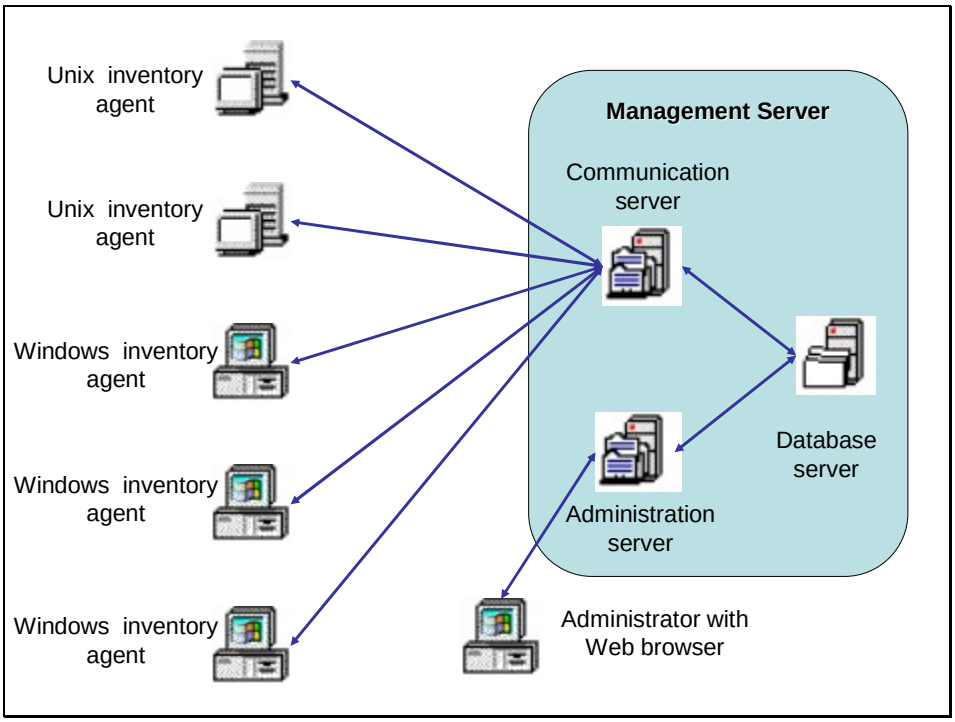


Figure 1 : OCS Inventory NG communication architecture.

NB: If you want to use multiple computers to host OCS inventory NG management server, we recommend that you setup it on Linux computers. OCS Inventory NG server for Windows comes as an integrated package containing all required components (apache, perl, php, mod_perl, mysql…).

Database server actually can only be MySQL 4.1 or higher, but we plan to support PostgreSQL.

Communication server needs Apache Web Server 1.3.X/2.X and is written in PERL as an Apache module. Why? Because PERL script is compiled when Apache starts, and not at each request. This is better for performance issue. Communication server may require some additional PERL module, depending your distribution.

Administration server is written in PHP 4 (or higher) and runs under Apache Web Server 1.3.X/2.X (but may run under other web servers). Administration requires ZIP capabilities enabled in PHP in order to use automatic deployment updates.

3.1 Under Linux Operating System.

We assume that you have:

- ✓ MySQL database server running somewhere and listening on default port 3306 with TCP/IP communication enabled.
- ✓ Apache Web server installed and running for Communication server and Administration server.
- ✓ PHP and Perl installed and usable by Apache Web server for the Administration server.
- ✓ Perl and mod_perl installed and usable by Apache Web server for the Communication server.

3.1.1 Requirements.

- ✓ Apache version 1.3.33 or higher / Apache version 2.0.46 or higher
  - ❖ Mod_perl version 1.29 or higher
  - ❖ Mod_php version 4.3.2 or higher
- ✓ PHP 4.3.2 or higher, with ZIP support enabled.
- ✓ PERL 5.6 or higher
  - ❖ Perl module XML::Simple version 2.13-1 or higher
  - ❖ Perl module Compress::Zlib version 1.34-1 or higher
  - ❖ Perl module DBI version 1.46-5 or higher
  - ❖ Perl module DBD::Mysql version 2.9003-3 or higher
  - ❖ Perl module Apache::DBI version 0.94-2 or higher
- ✓ MySQL version 4.1.7 or higher

3.1.2 Installing Web administration server.

The Web administration server requires Apache web server and PHP 4 scripting language (see § 3.1.1 Requirements.).

You must have root privileges to setup Administration server.

Download "OCS-NG_LINUX_SERVER_1.0-XX.tar.gz" from OCS Inventory Web Site (where XX is the last release version, like 1.0-RC2).

Unpack it.

- ✓ tar –xvzf OCSNG_LINUX_SERVER_1.0-XX.tar.gz

Move or copy extracted directory "OCSNG_LINUX_SERVER_1.0-XX/ocsreports" to the web server document root directory, usually "/var/www/html".

- ✓ mv OCS-NG_LINUX_SERVER_1.0-XX/ocsreports /var/www/html

Ensure ownership and permissions on files are fine (see § 8.3.1 Files and directories permissions under Linux.).

- ✓ cd /var/www/html
- ✓ chown –R root:root ocsreports
- ✓ chmod gou+rx ocsreports ocsreports/css ocsreports/files ocsreports/image ocsreports/languages

Add write permissions for Apache server account to "ocsreports" folder to allow configuration of administrative interface, use of IPDISCOVER utility, and importing new release of agents. For this, we will change group ownership of directory "ocsreports" to Apache server account, to let him write files (you can find group name of Apache server account in Apache configuration file "httpd.conf", usually located in directory "/etc/httpd/conf", by searching directive "Group").

- ✓ chown root:apache ocsreports
- ✓ chmod gu+w ocsreports

3.1.3 Installing Web communication server.

The Web communication server requires Apache web server and Perl 5 scripting language and some additional modules for Perl 5 (see § 3.1.1 Requirements.). It act as an Apache module which handle HTTP requests of OCS Inventory agents to a virtual directory "/ocsinventory".

You must have root privileges to setup Administration server.

Download from http://search.cpan.org the following Perl modules:

- ✓ XML-Simple-2.14.tar.gz
- ✓ Compress-Zlib-1.34.tar.gz
- ✓ DBI-1.48.tar.gz
- ✓ DBD-mysql-2.9008.tar.gz
- ✓ Apache-DBI-0.94.tar.gz

Install XML::Simple module.

- ✓ tar –xvzf XML-Simple-2.14.tar.gz
- ✓ cd XML-Simple-2.14
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install Compress::Zlib module.

- ✓ tar –xvzf Compress-Zlib-1.34.tar.gz
- ✓ cd Compress-Zlib-1.34
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install DBI module.

- ✓ tar –xvzf DBI-1.48.tar.gz
- ✓ cd DBI-1.48
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install BDB::mysql module.

- ✓ tar –xvzf DBD-mysql-2.9008.tar.gz
- ✓ cd DBD-mysql-2.9008
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install Apache::DBI module.

- ✓ tar –xvzf Apache-DBI-0.94.tar.gz
- ✓ cd Apache-DBI-0.94
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

If not already done, download “OCSNG_LINUX_SERVER_1.0-XX.tar.gz” from OCS Inventory Web Site (where XX is the last release version, like 1.0-RC2).

Unpack it.

- ✓ tar –xvzf OCSNG_LINUX_SERVER_1.0-XX.tar.gz

Ensure ownership and permissions on files are fine (see § 8.3.1 Files and directories permissions under Linux.).

- ✓ chown –R root:root OCSNG_LINUX_SERVER_1.0-XX/ocsinventory-NG
- ✓ chmod gou+rx OCSNG_LINUX_SERVER_1.0-XX/ocsinventory-NG

Move or copy extracted directory “ocsinventory-NG” to a directory of your server. Usually local applications are added into “/usr/local” directory.

- ✓ mv OCSNG_LINUX_SERVER_1.0-XX/ocsinventory-NG /usr/local

Now, you have to configure communication server to work with your database server, and some other minor configuration.

If you are using mod_perl version 1.999.22 or higher, you must replace existing perl module “Ocsinventory.pm” of directory “ocsinventory-NG” by the one provided in directory “OCS-NG_LINUX_SERVER_1.0XX/Ocsinventory.pm_4_mp_since_1.999_22”.

- ✓ mv OCSNG_LINUX_SERVER_1.0-XX/Ocsinventory.pm_4_mp_since_1.999_22/Ocsinventory.pm /usr/local/ocsinventory-NG

NB: You can check which version of mod_perl you’re using by querying the software database of your server.
Under RPM enabled Linux distribution (RedHat/Fedora, Mandriva…), run “rpm –q mod_perl”.
Under DPKG enabled Linux distribution (Debian, Unbuttu…), run “dpkg –l libapache-mod-perl*”.*

Go to the installation directory.

- ✓ cd /usr/local/ocsinventory-NG

By default, communication server assumes that installation directory is “/var/www/ocsinventory-NG”. You may have to change this setting in file “Ocsinventory_startup.pl” and in Apache directive file.

- ✓ vi Ocsinventory_startup.pl
- ✓ Update line <use lib “/var/www/ocsinventory-NG”;> to the value <use lib “/usr/local/ocsinventory-NG”;> in the file.

```
#!/usr/bin/perl
################################################################################
##OCS inventory-NG Version 1.0 Beta
##Copyleft Pascal DANEK 2005
##Web : http://ocsinventory.sourceforge.net
##
##This code is open source and may be copied and modified as long as the source
##code is always made freely available.
##Please refer to the General Public Licence http://www.gnu.org/ or Licence.txt
################################################################################
#
#Apache startup script
use lib "/usr/local/ocsinventory-NG";# <= Change this if Ocsinventory.pm is in an other place
use XML::Simple;
use Compress::Zlib;
use Apache::DBI;
use DBI;
1;
```

Figure 2: Ocsinventory_startup.pl sample file

- ✓ vi apache_config
- ✓ Update line <PerlRequire /var/www/ocsinventory-NG/Ocsinventory_startup.pl> to the value <PerlRequire /usr/local/ocsinventory-NG/Ocsinventory_startup.pl> in the file.

Copy Apache configuration file to apache configuration directory if you use “include” directive in your httpd.conf (usually “/etc/httpd/conf.d” directory), or copy content of apache_config and paste it to httpd.conf file, (usually “/etc/httpd/conf/httpd.conf” file).

- ✓ cp apache_config /etc/httpd/conf.d/ocsinventory-ng.conf

NB: If you wish to use another computer for hosting the database, you have to update constant “DBHOST” in the file to specify address of database server. Also, if you do not wish to use default MySQL user “ocs” with password “ocs” created during the configuration process (see § 3.1.4 Configuring management server.*), you must update constants “DBUSER” and “DBPWD”.*

```
#ocsinventory-ng configuration
PerlRequire /usr/local/ocsinventory-NG/Ocsinventory_startup.pl
<Location /ocsinventory>
    order deny,allow
    allow from all
    SetHandler perl-script
    PerlHandler Ocsinventory
    #Database name
    PerlSetVar DBNAME ocsweb
    #Database user
    PerlSetVar DBUSER ocs
    #Database password
    PerlSetVar DBPWD ocs
    #Listening server port
    PerlSetVar DBPORT 3306
    #Server hostname
    PerlSetVar DBHOST localhost
</Location>
```

Figure 3: Apache configuration sample file

Next, you have to create the directory where communication server will put his logs. Default is assumed to be "/var/log/ocsinventory-NG". You also have to allow Apache web server to write in this directory. Usually, Apache web server runs under "apache" or "www-data" or "nobody" system account (you can see which account is used in your httpd.conf file). Here we assume "apache" account is used.

- ✓ mkdir /var/log/ocsinventory-NG
- ✓ chown –R apache:apache /var/log/ocsinventory-NG

If you put log directory in another place, you have to update the path in the file "Ocsinventory.pm".

- ✓ vi Ocsinventory.pm
- ✓ Update line <use constant LOGPATH => "/var/log/ocsinventory-NG";> to match your need.

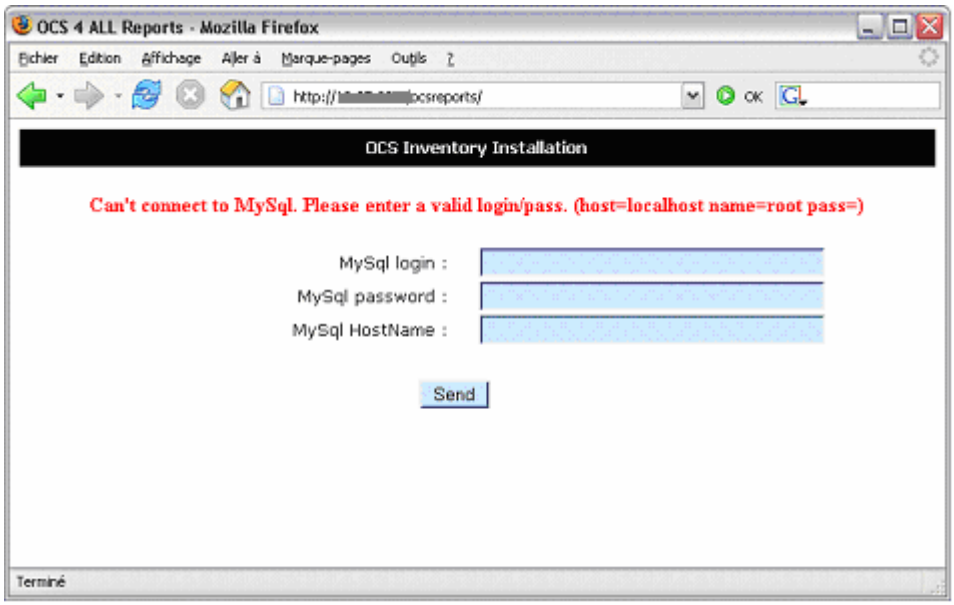
Now, you can restart Apache web server for changes to take effect.

- ✓ /etc/rc.d/init.d/httpd restart

3.1.4 Configuring management server.

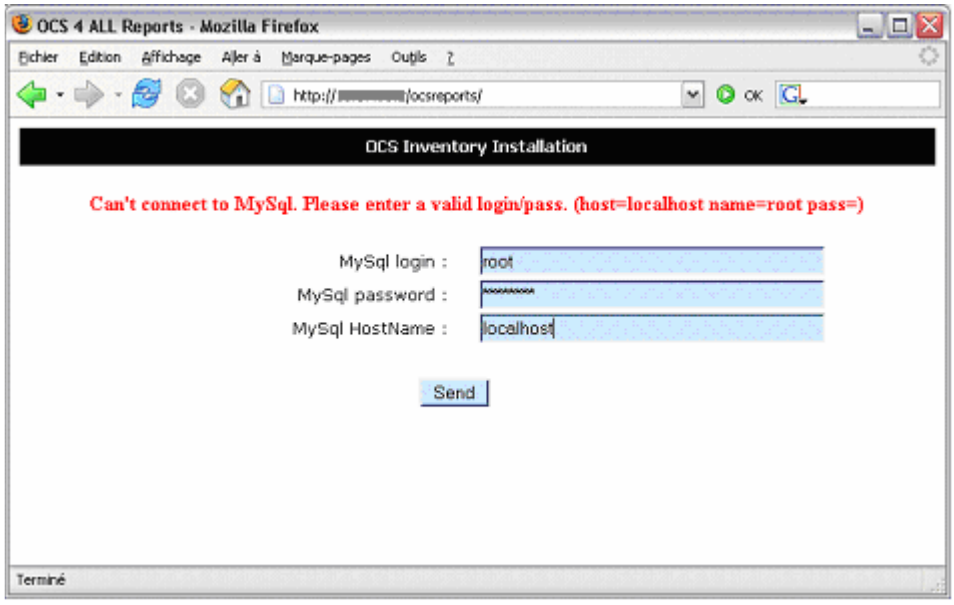
Open your favorite web browser and point it on URL "http://administration_server/ocsreports" to connect the Administration server.

As database is not yet created, this will begin OCS Inventory setup process. Otherwise, you can rerun configuration process by browsing http://administration_server/ocsreports/install.php URL (this must be used when upgrading OCS Inventory administration server).



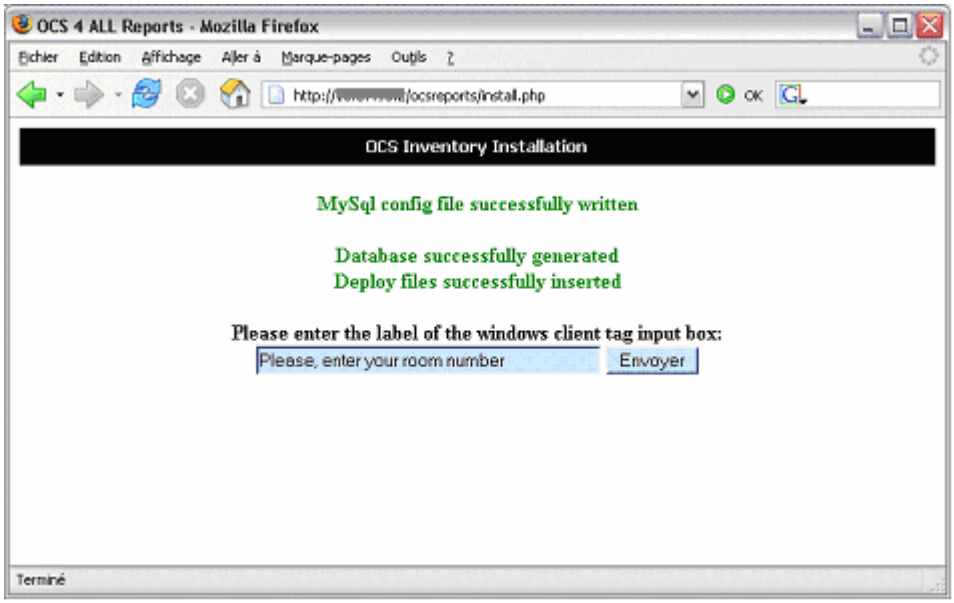
Fill in information to connect to MySQL database server with a user who has the ability to create database, tables, indexes, etc (usually root):

- ✓ MySQL user name
- ✓ MySQL user password
- ✓ MySQL hostname

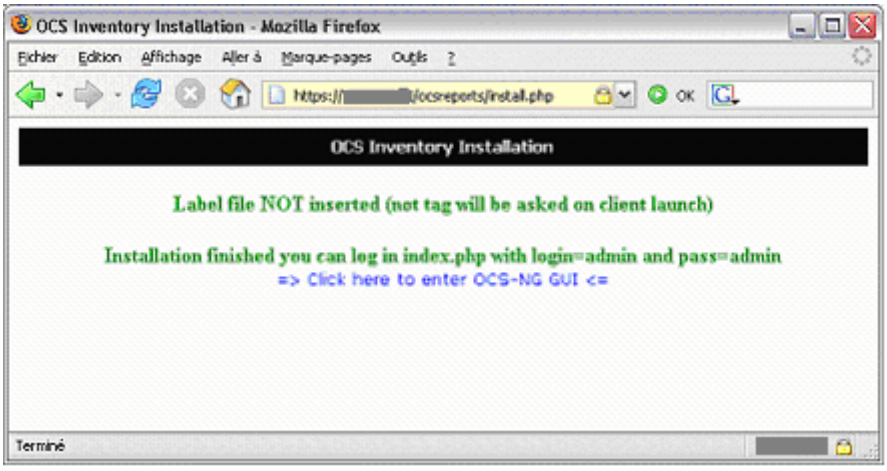


NB: Setup will create "ocsweb" database, and a MySQL user "ocs" with password "ocs". It will also grant to user "ocs" privileges "Select | Insert | Update | Delete | Create | Drop | References | Index | Alter | Create temp | Lock" on database "ocsweb". *This user will be used by Administration server and Communication server to connect to the database. If you do not wish to use default MySQL user "ocs" with "ocs" password, you must update in the file "dbconfig.inc.php" PHP constants "COMPTE_BASE", which is MySQL user login, and/or "PSWD_BASE", which MySQL user password. Don't forget to also update Communication server configuration, especially in apache configuration file.*

Finally, you may fill in a text describing the TAG, a string displayed at first launch of the agent to ask user to enter the TAG Value. It's a generic data which allows you to sort the new computers (geographical site, first floor, john room....). If you don't want this functionality, just let it blank.



Configuration of Management server is now finished.



Just point your browser to the URL "http://administration_server/ocsreports" and login in with "admin" as login and "admin" as password.

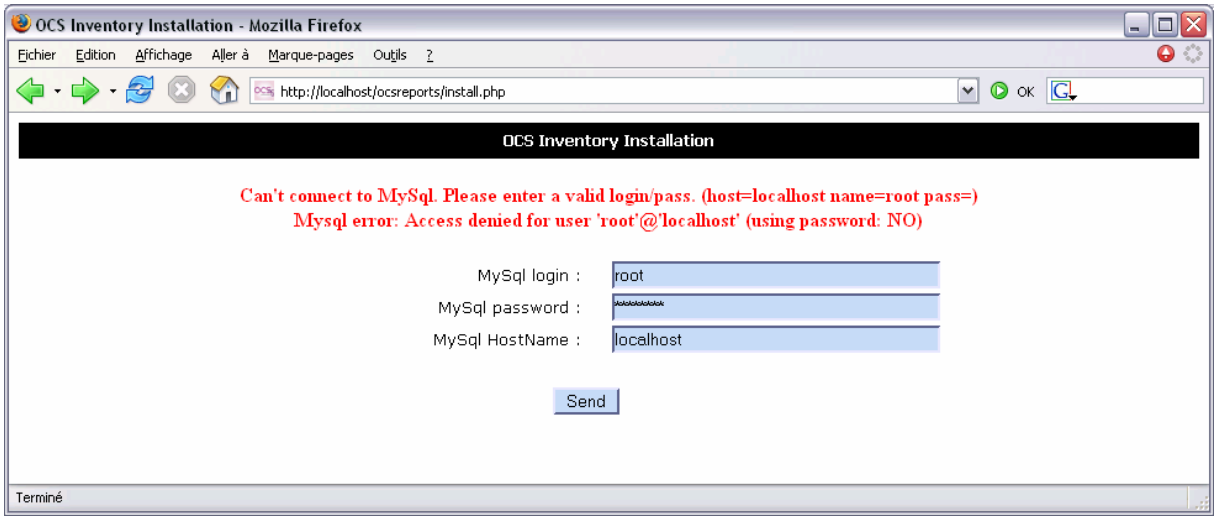
3.1.5 Upgrading management server.

When new versions of web communication server or web administration server are released, you must upgrade your installation.

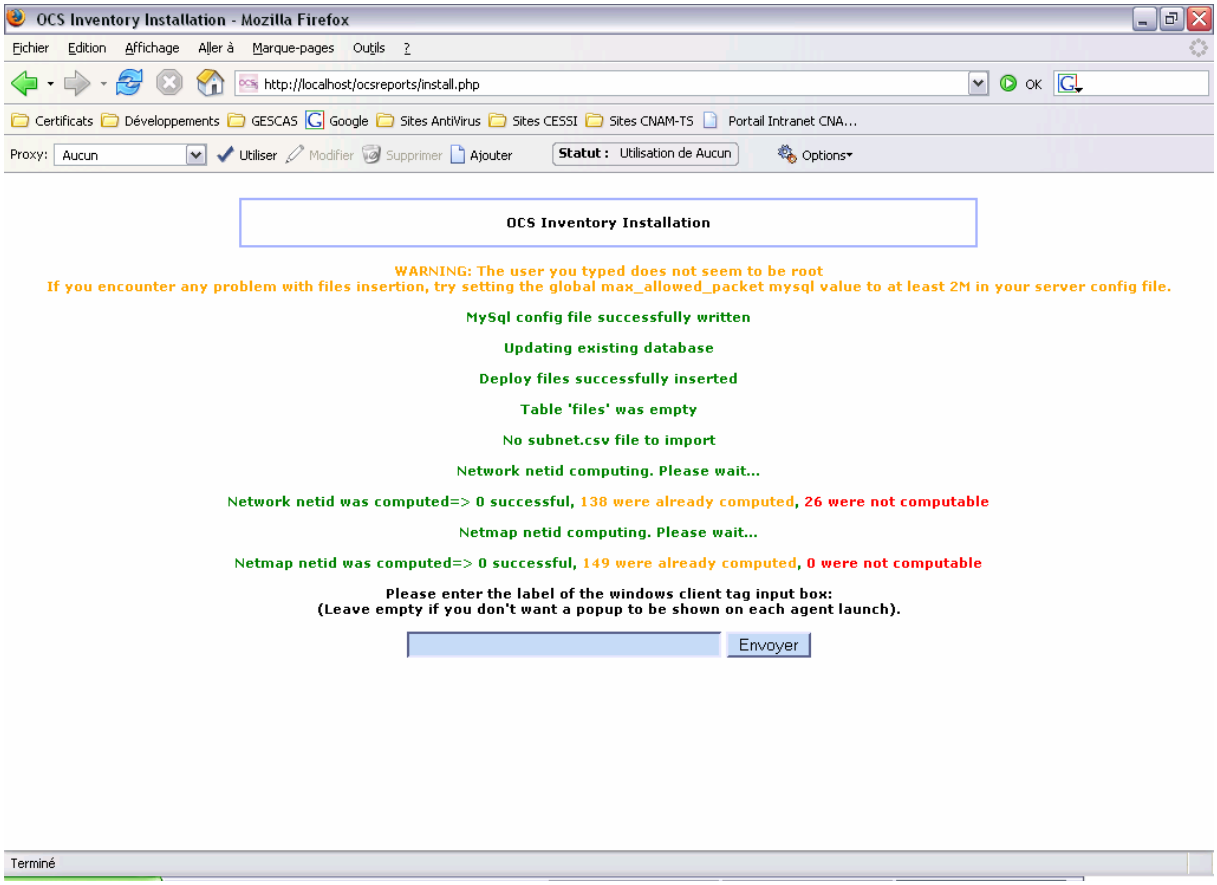
To upgrade web communication server, you must follow instructions as described in § 3.1.3 Installing Web communication server. You don't need to update Perl modules if not required in the release notes.

To upgrade web administration server, you must follow instructions as described in § 3.1.2 Installing Web administration server.

If you've upgraded web administration server, you must ensure that your database schema and default data are up to date. For this, just point your favorite web browser to URL "http://administration_server/ocsreports/install.php" to re-run configuration of management server as described in § 3.1.4 Configuring management server.



Fill in MySQL administrator name (usually root) and password, and MySQL database server address and click “Send” button.



Finally, you may fill in a text describing the TAG if you wish to use it.

3.2 Under Windows Operating System.

We have chosen to package OCS inventory NG server for Windows as an integrated package containing all required components. As is, the 3 main components of Management server (database server, web communication server and web administration server) are installed on the same computer.

OCS Inventory NG server 1.0 RC2 for Windows is based on ApacheFriends XAMPP version 1.5.0 pl1 (http://www.apachefriends.org/index-en.html) which setup the following components on a single computer:

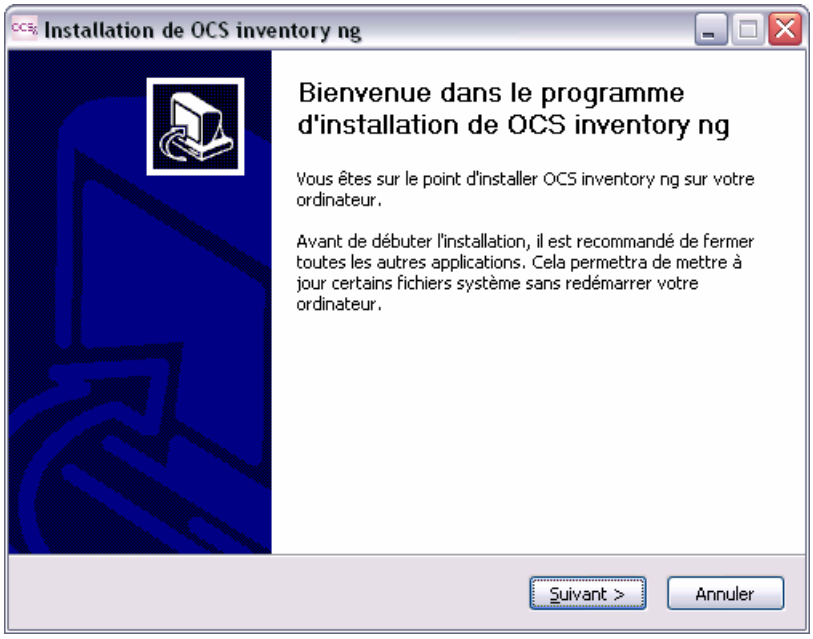
- ✓ Apache 2.0.55
- ✓ MySQL 5.0.15
- ✓ PHP 5.0.5 + PHP 4.4.1 pl1 + PEAR
- ✓ eAccelerator 0.9.4-dev
- ✓ PHP-Switch win32 1.0
- ✓ XAMPP Control Version 1.0 from www.nat32.com
- ✓ XAMPP Security 1.0
- ✓ SQLite 2.8.15
- ✓ OpenSSL 0.9.8a
- ✓ phpMyAdmin 2.6.4-pl3
- ✓ ADODB 4.65
- ✓ Mercury Mail Transport System for Win32 and NetWare Systems v4.01b
- ✓ FileZilla FTP Server 0.9.10a
- ✓ Webalizer 2.01-10
- ✓ Zend Optimizer 2.5.10a
- ✓ Perl 5.8.7
- ✓ **mod_perl 2.0.1**

NB: Even if all these components are installed, you will be able to choose the components you want to automatically start.

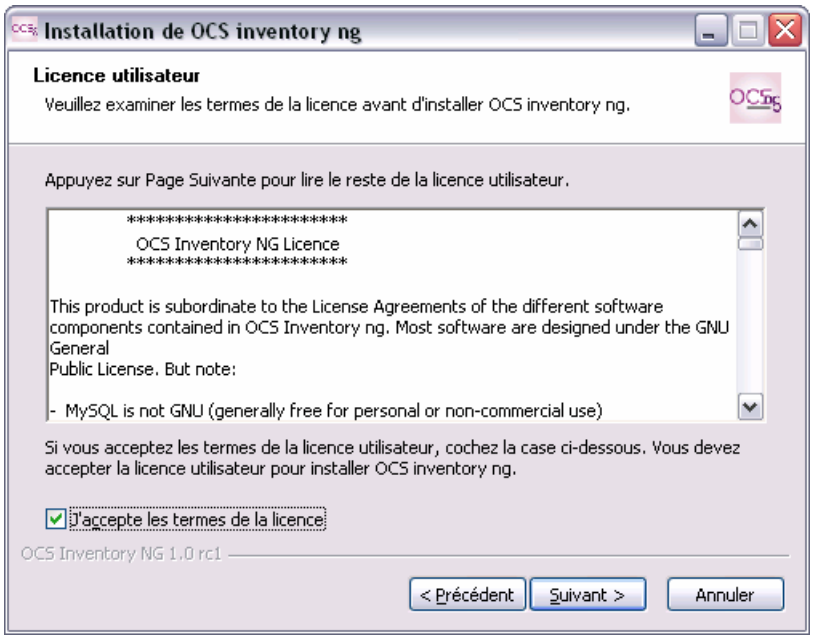
3.2.1 Installing management server.

You must have Administrator privileges to setup OCS Inventory NG server under Windows NT4, Windows 2000, Windows XP or Windows Server 2003.

Download “OCSNG_WINDOWS_SERVER_1.0-XX.zip” from OCS Inventory Web Site” (where XX is the last release version, for example 1.0-RC2), unpack it and launch “OcsSetup.exe.

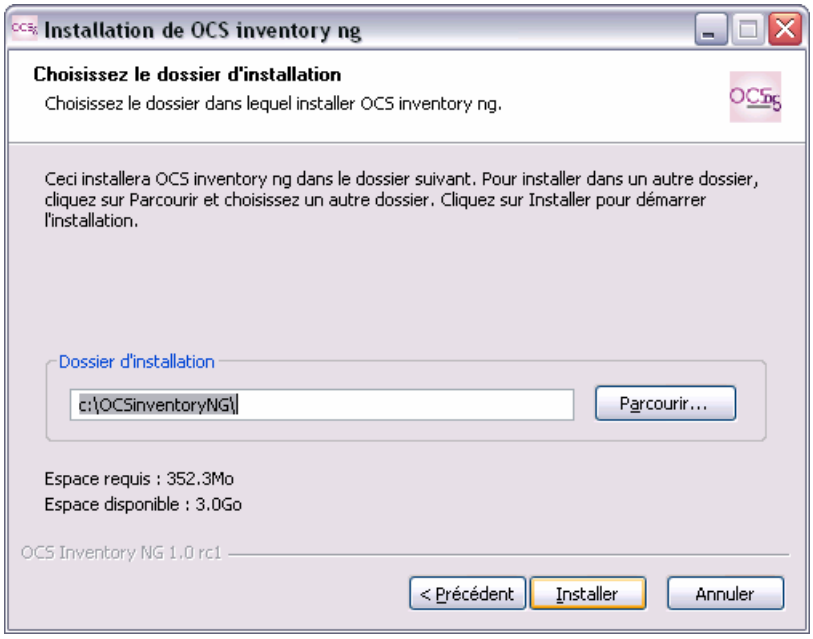


Click “Next” button and accept License agreement.

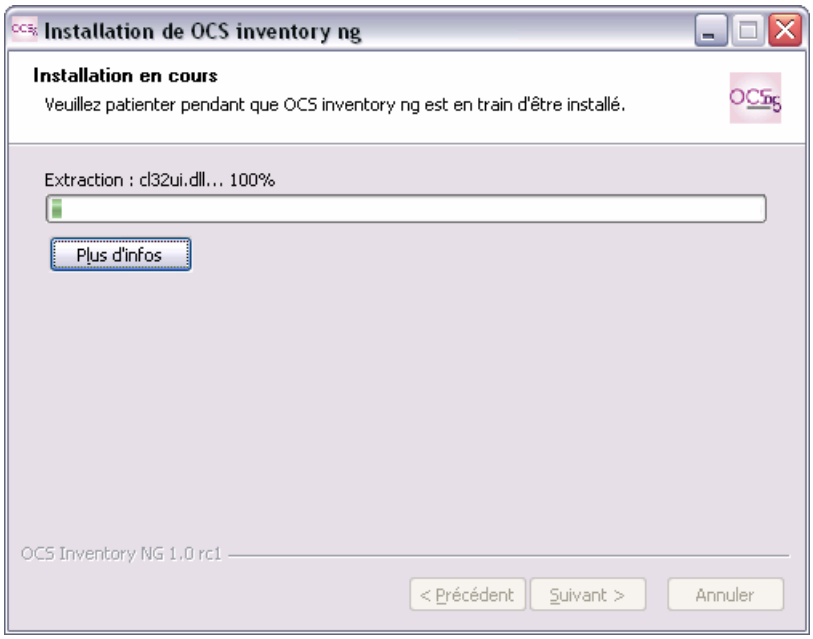


Choose installation directory, by default “C:\OCSInventoryNG”. You need 360 MB of free hard disk space.

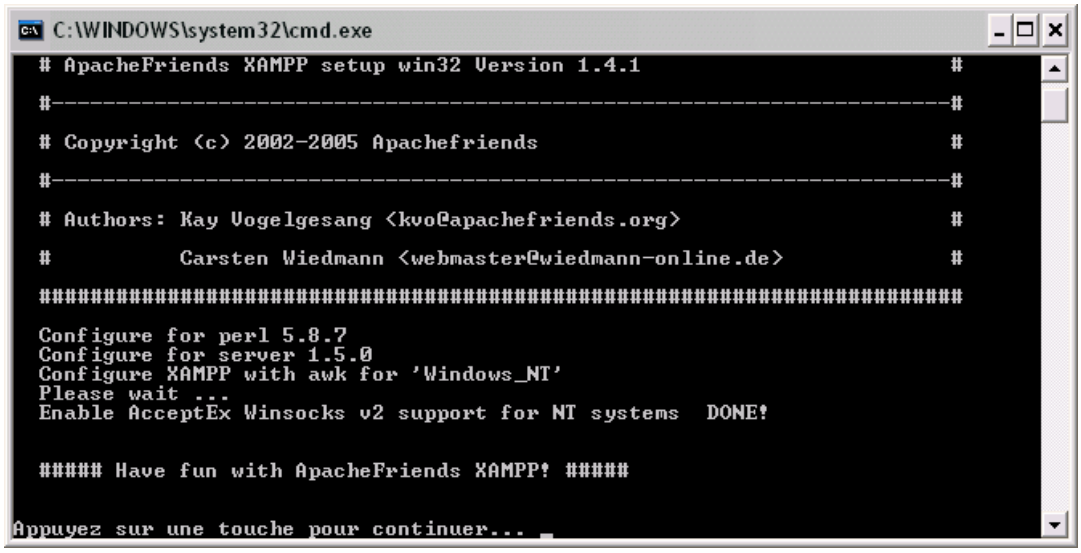
NB: When upgrading, you must choose the same installation folder. See § 3.2.4 Upgrading management server.

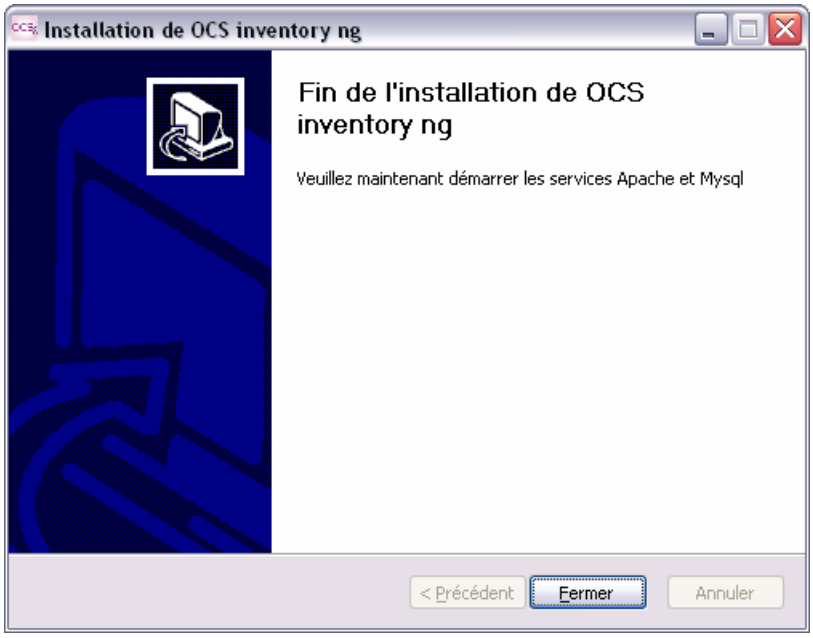


Next, all components are installed.



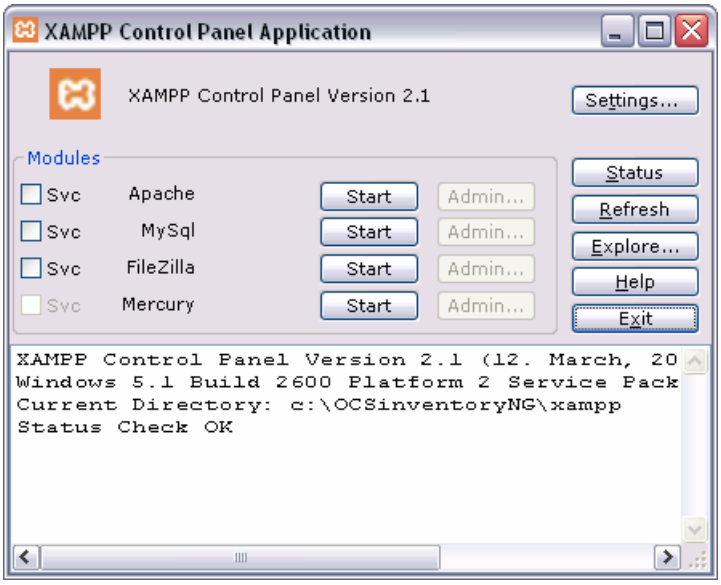
At the end of the process, a command prompt show you if everything is fine and ask you to press any key.





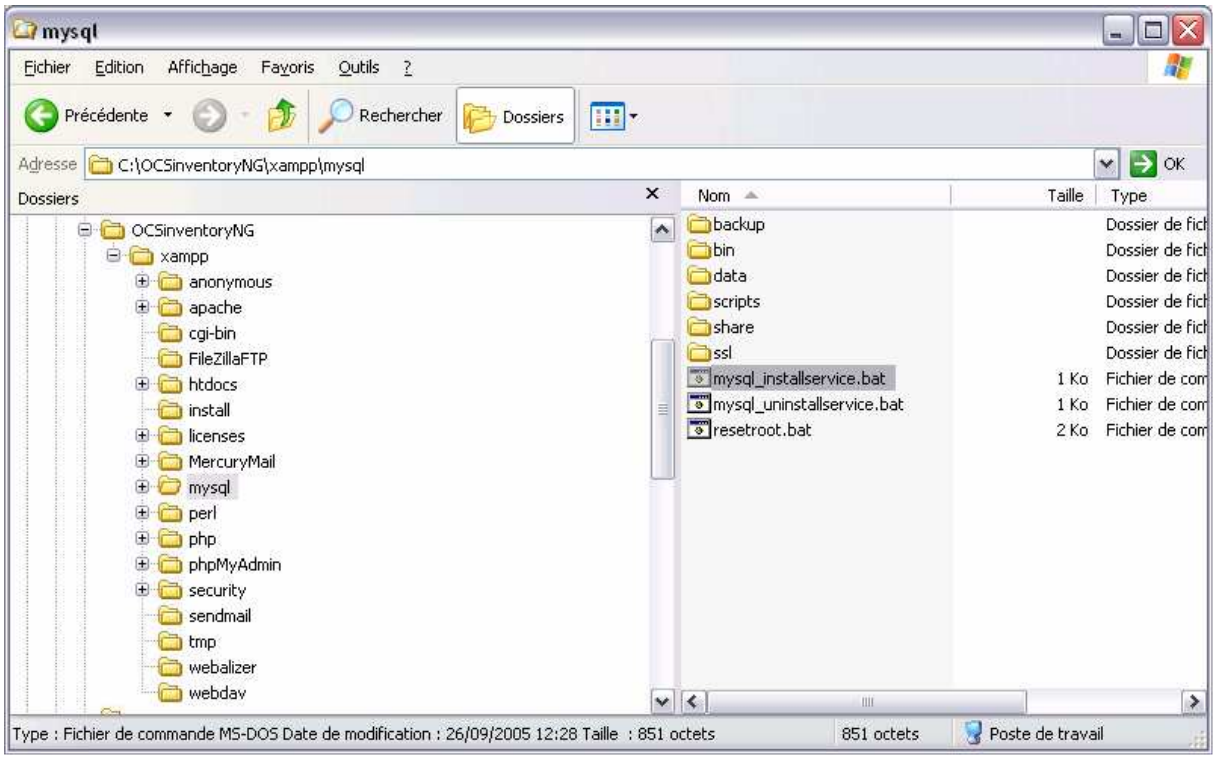
Setup is now finished. You must start MySQL database server and Apache web server.

The XAMPP control panel is displayed to allow you to do this, **but don't use it because services are not started with good parameters, especially PERL support for Apache and MySQL old password support**.

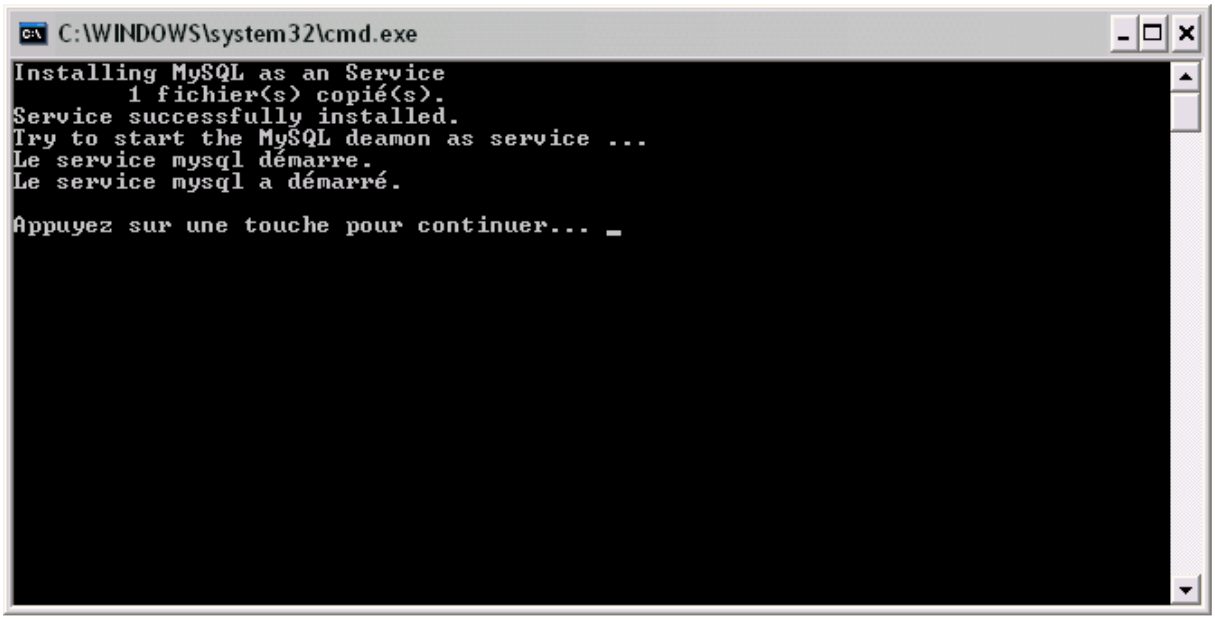


Close XAMPP control panel and open Windows Explorer.

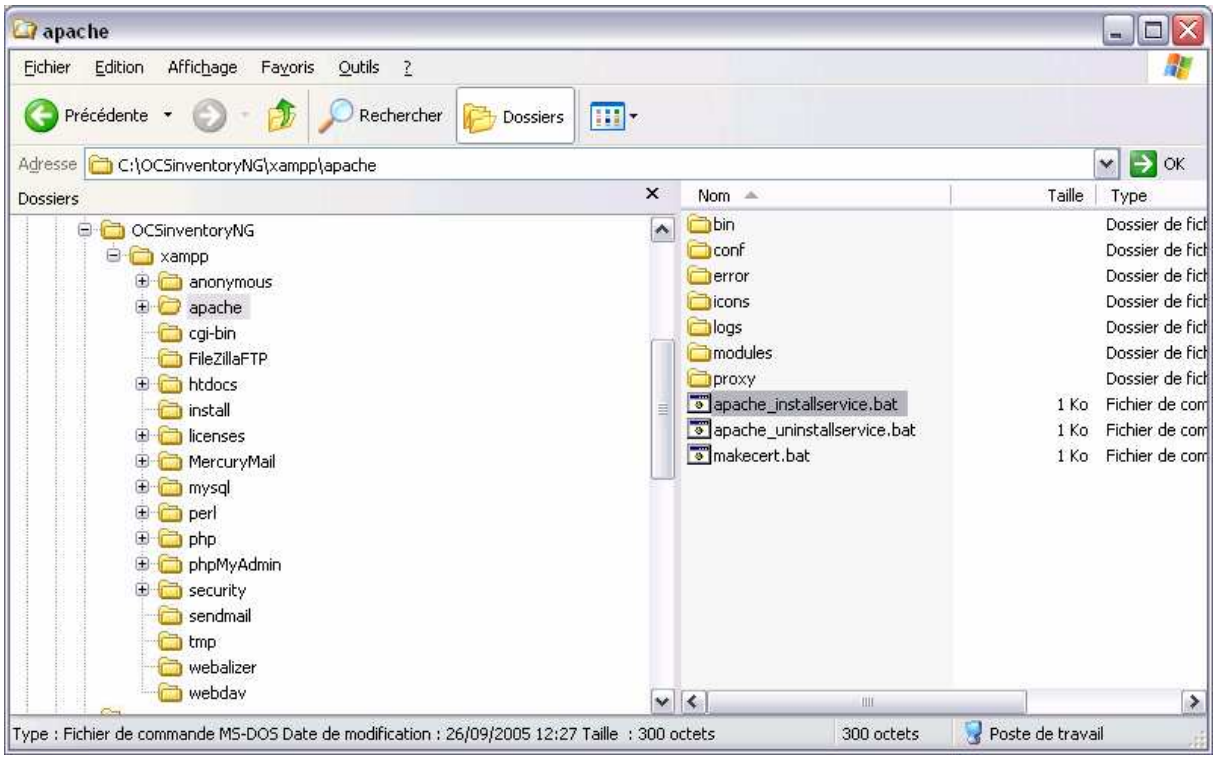
Navigate to folder "C:\OCSInventoryNG\xampp\mysql" and run script "mysql_installservice.bat".



It will copy "my.ini" MySQL configuration file into Windows directory "C:\Windows" or "C:\WINNT", install MySQL as a service and start it.

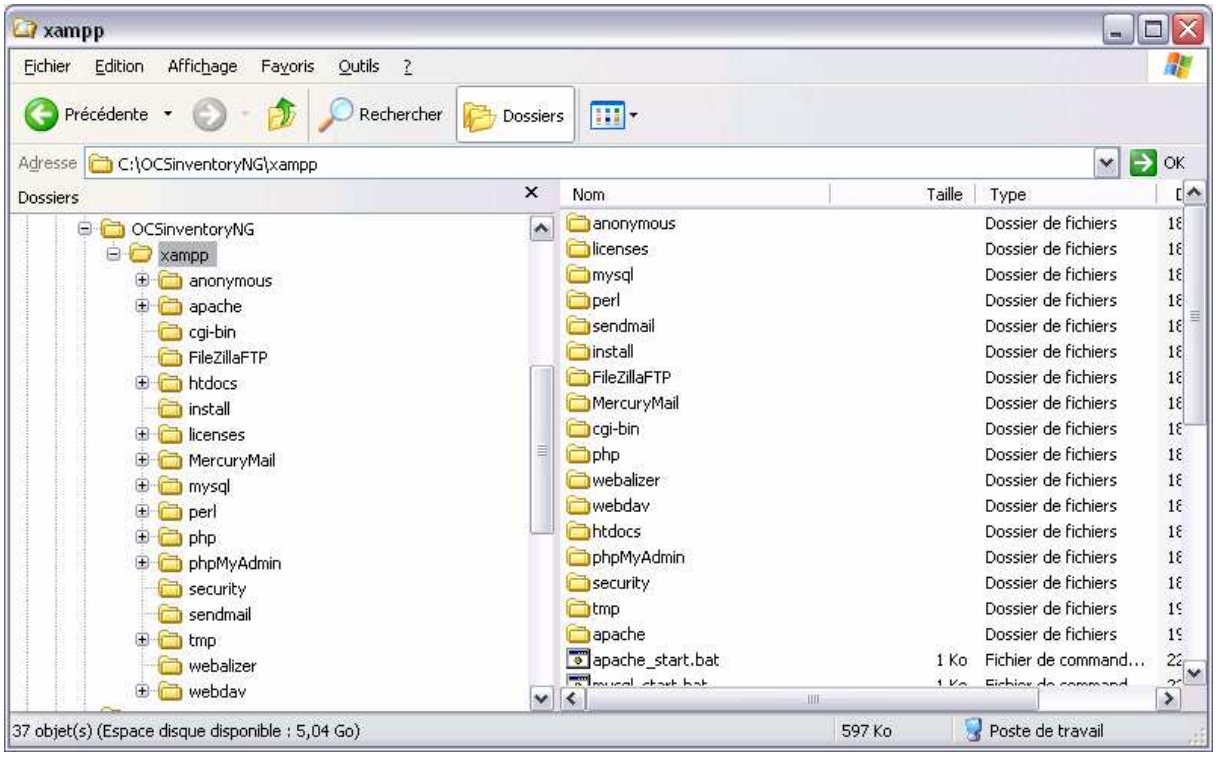


Navigate to folder "C:\OCSInventoryNG\xampp\apache" and run script "apache_installservice.bat".



It will install Apache2 as a service and start it.

OCS Inventory NG setup for Windows has installed XMAPP components under “xampp” subfolder of selected installation directory. Apache web server document root directory is located in the “htdocs” sub directory of XAMPP. This is here that “ocsinventory-NG” communication server files and “ocsreports” administration server files are installed.

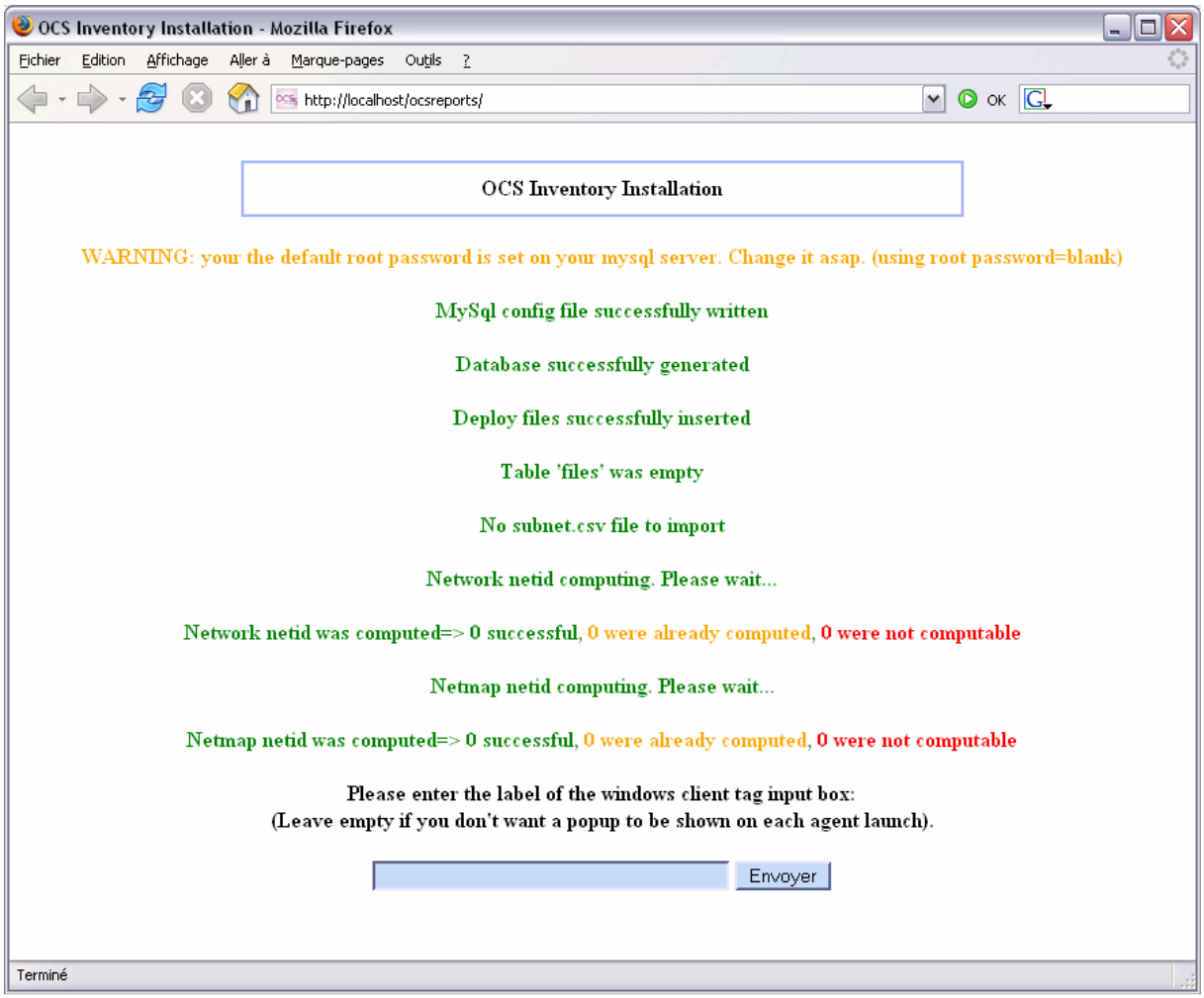


Apache logs (“access.log”, “error.log”, “phperror.log”) and communication server logs (“ocsinventory-NG.log”) are located in the sub-directory “Apache\Logs”.

3.2.2 Configuring management server.

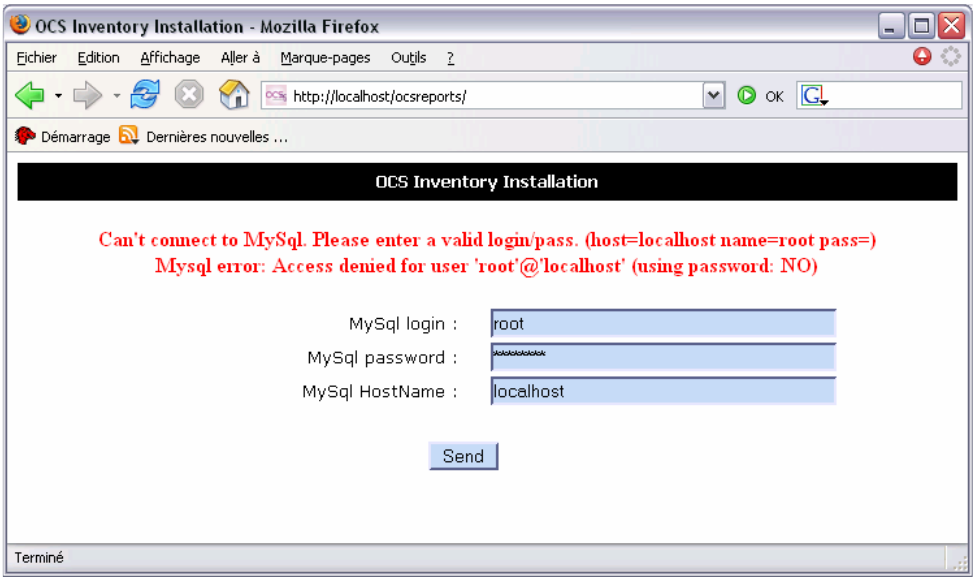
Open your favorite web browser on the server and point it on URL "http://localhost/ocsreports" to connect the Administration server.

If you haven't yet setup the security of XAMPP components, especially MySQL root password, the administration will automatically configure MySQL database and other options.



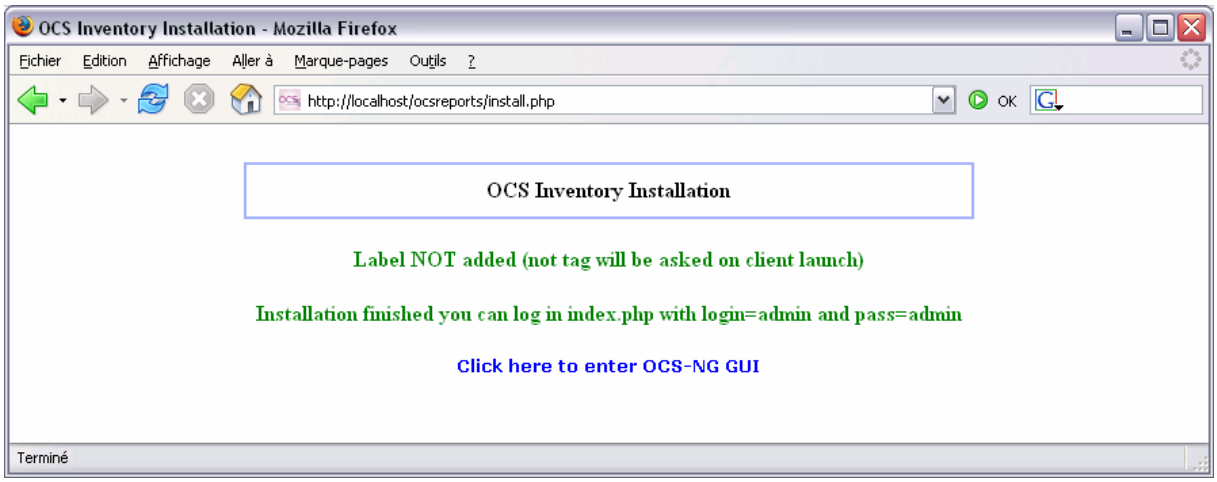
Otherwise, you will be prompted for information to connect to MySQL database server with a user who has the ability to create database, tables, indexes, etc:

- ✓ MySQL user name, "root" by default
- ✓ MySQL user password
- ✓ MySQL hostname, "localhost"



NB: Setup will create "ocsweb" database, and a MySQL user "ocs" with password "ocs". It will also grant to user "ocs" privileges "Select | Insert | Update | Delete | Create | Drop | References | Index | Alter | Create temp | Lock" on database "ocsweb". *This user will be used by Administration server and Communication server to connect to the database. If you do not wish to use default MySQL user "ocs" with "ocs" password, you must update in the file "dbconfig.inc.php" PHP constants "COMPTE_BASE", which is MySQL user login, and/or "PSWD_BASE", which MySQL user password. Don't forget to also update Communication server configuration, especially in apache configuration file.*

Finally, you may fill in a text describing the TAG, a string displayed at first launch of the agent to ask user to enter the TAG Value. It's a generic data which allows you to sort the new computers (geographical site, first floor, john room....). If you don't want this functionality, just let it blank.



Configuration of Management server is now finished.

3.2.3 Updating security of XAMPP components.

By default, XAMPP is setup without security. MySQL root account do not have password, XAMPP web configuration interface is accessible by everybody without authentication…

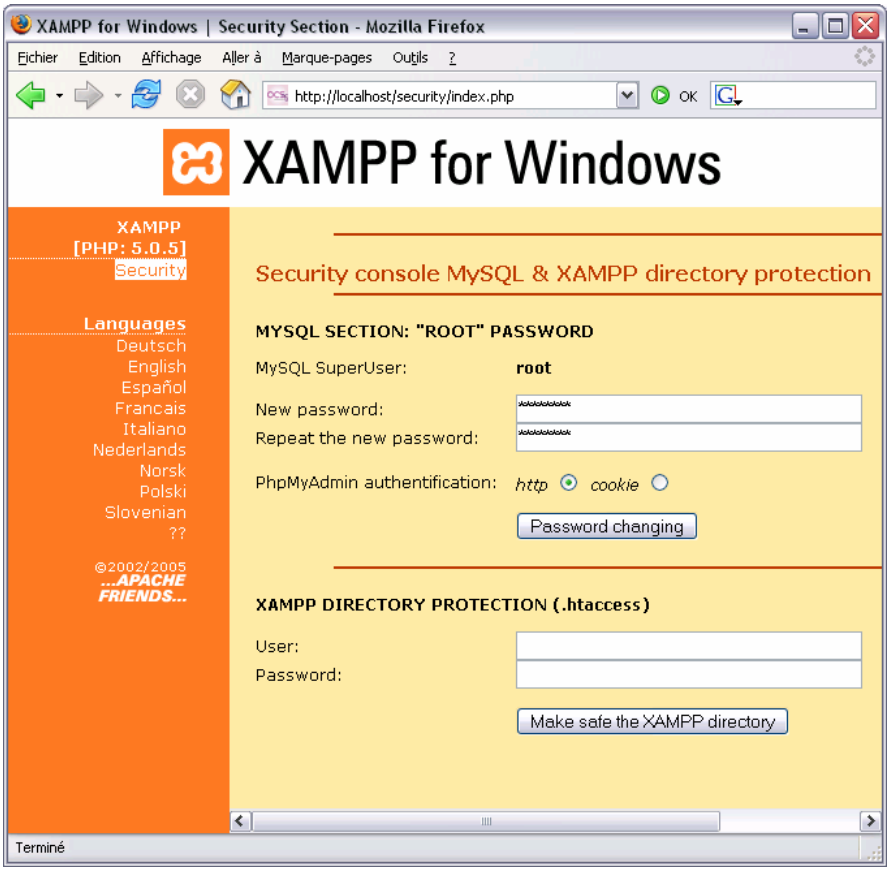
You must update this.

Open your favorite web browser on the server and point it on URL "http://localhost/xampp/splash.php" to connect the XAMPP configuration GUI.

Click on the language you want to access the XAMPP main configuration menu.

Then, click “Security” on the left menu. As you will see, all is marked as unsecure or unknown for non started components.

You can change this by clicking the link “http://localhost/xampp/xamppsecurity.php”.

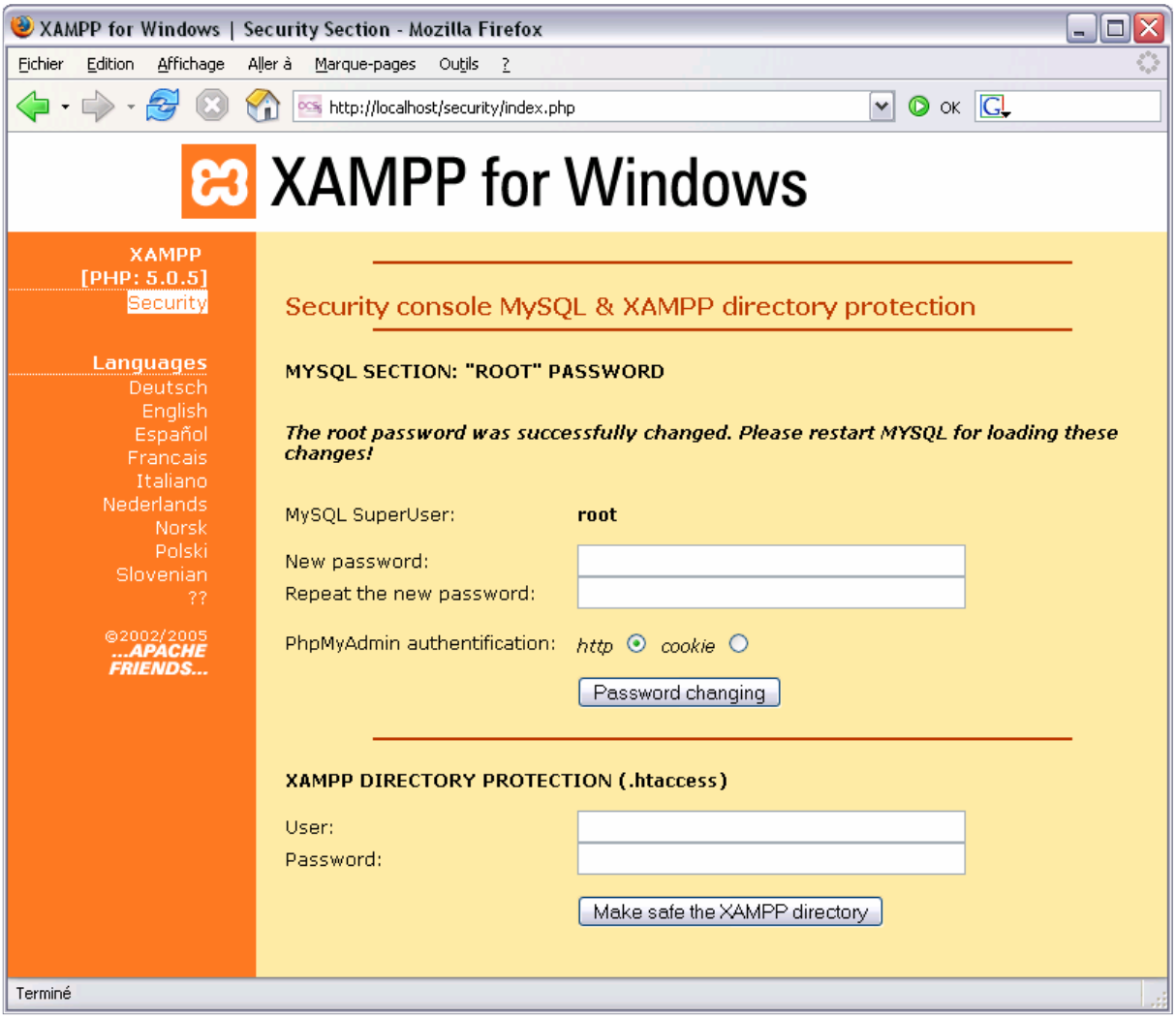


First of all, you must fill in MySQL root password and select phpMyAdmin authentication method.

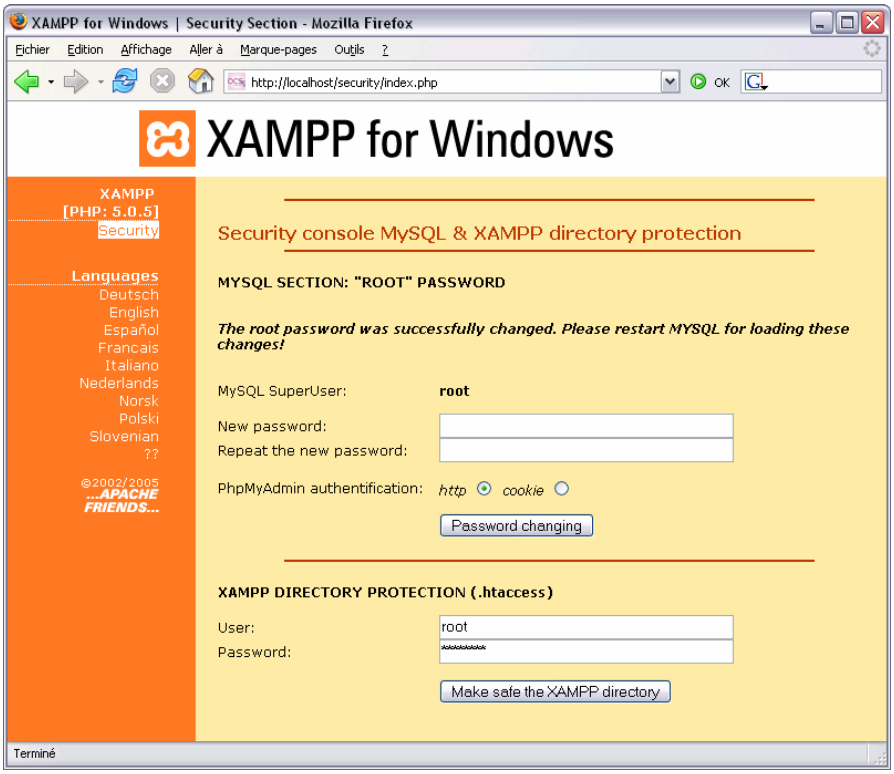
We recommend using “cookie” authentication for phpMyAdmin, because we encounter many problems with HTTP authentication.

NB: You can change this at any time by visiting the security web page of XAMPP server.

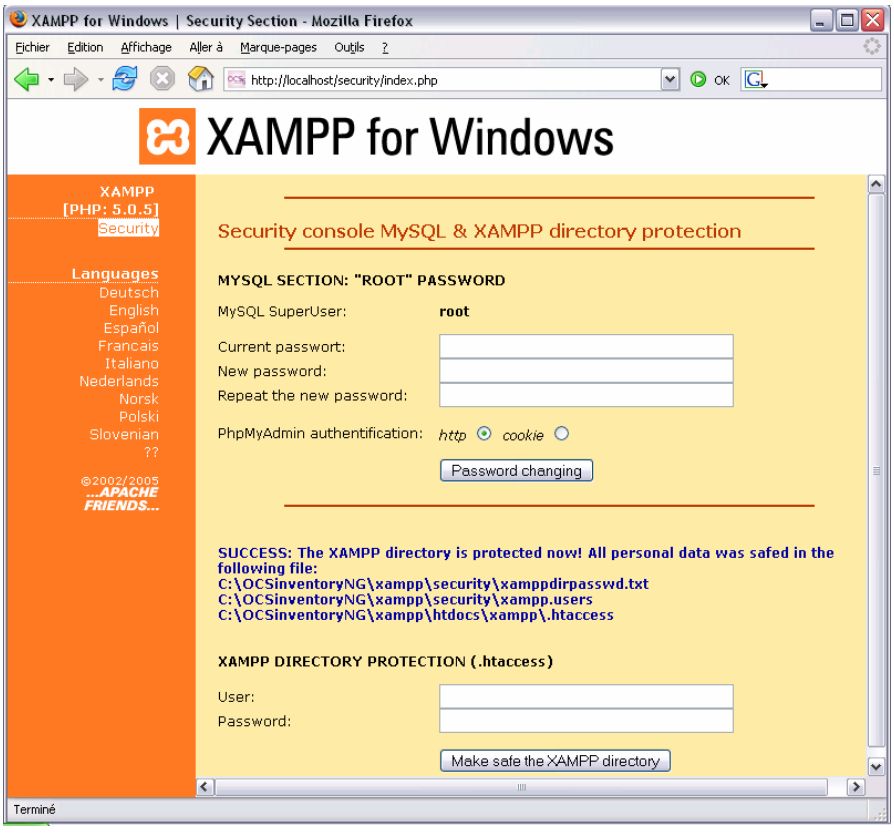
Validate your changes by clicking “Password changing” button.



You can then protect the access to XAMPP configuration menu by filling in user and password for XAMPP DIRECTORY PROTECTION. As is, this user and password will be asked to connect to XAMPP configuration menu through a web browser.

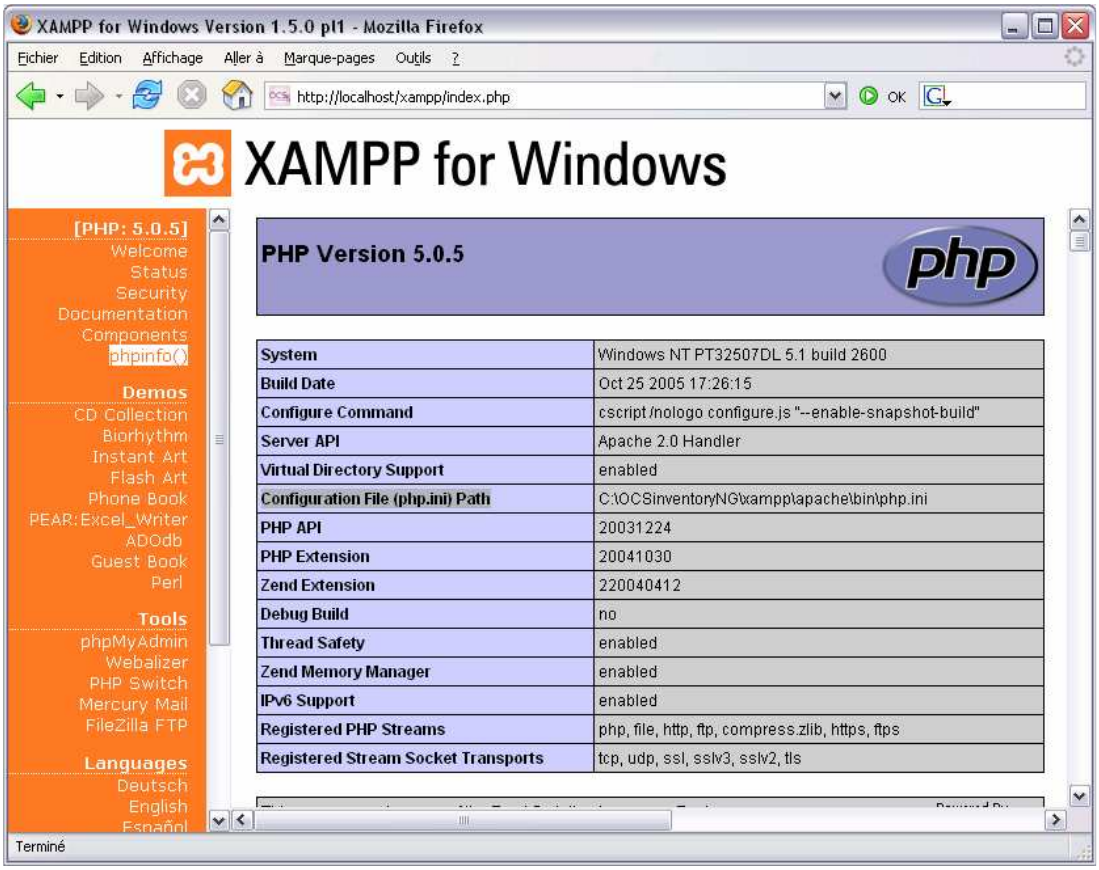


Validate your changes by clicking “Make safe the XAMPP directory” button.

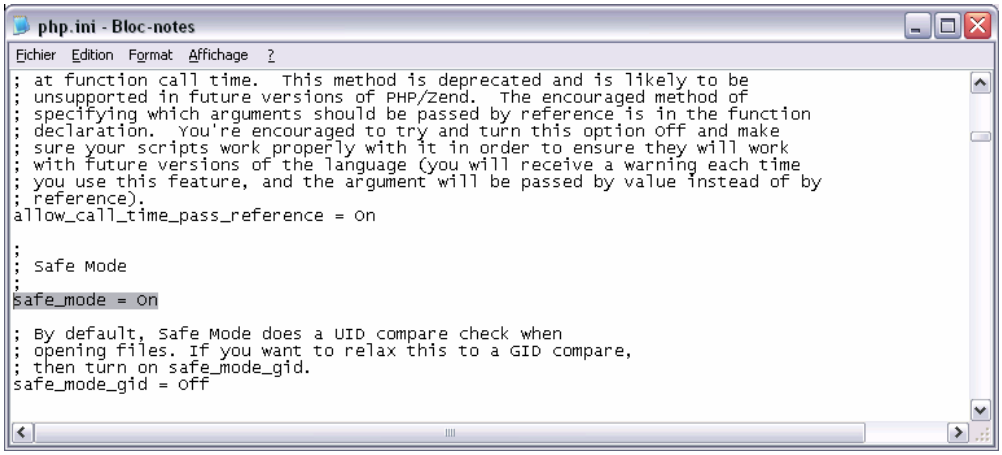


Now, you may enable PHP safe mode. Disabling safe mode is only recommended for development use.

Click on “phpinfo()” left side menu to display information about PHP installation.



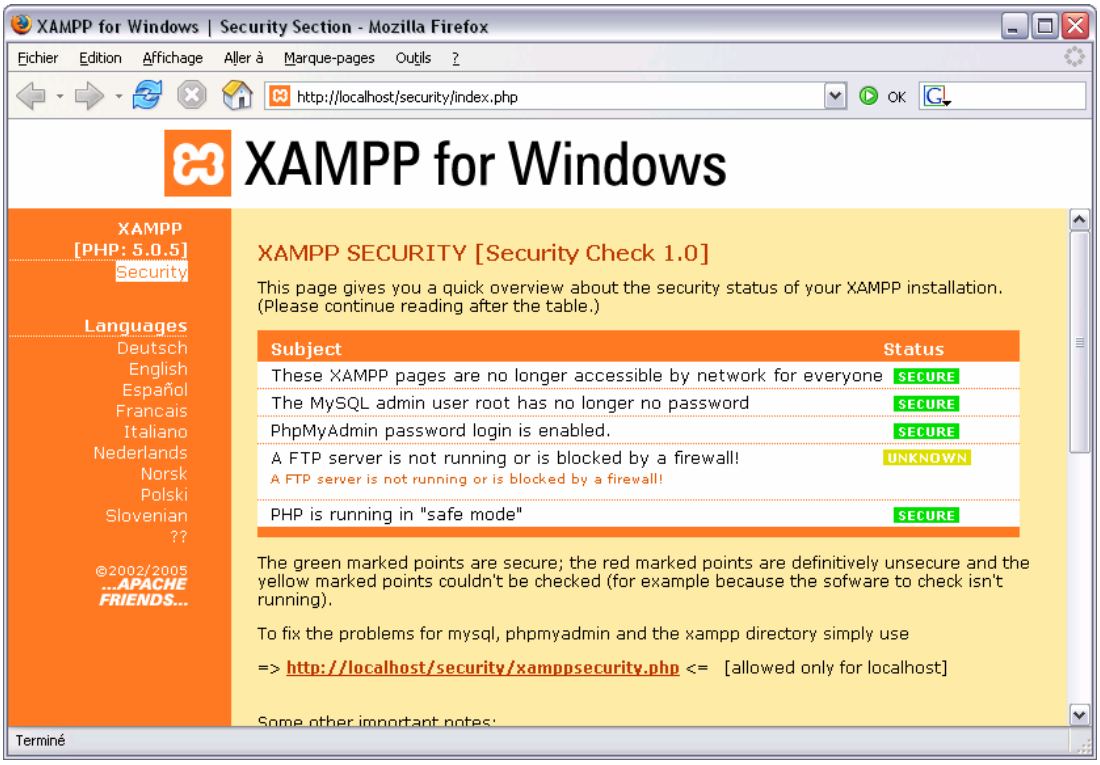
You will see where is located the file “php.ini”, which store configuration about PHP (by default, “C:\OCSInventoryNG\xampp\apache\bin\php.ini”). Open this file with your favorite text editor and update the line “safe_mode = Off” to “safe_mode = “On”.



Finally, you must restart Apache and MySQL services for changes to take effect.

Open XAMPP Control Panel from system tray or from “OCS Inventory NG” start menu folder, click “Stop” button for Apache, then “Start” button and do the same for MySQL.

You can now reselect “Security” on left side menu to see that all started services are now secured.

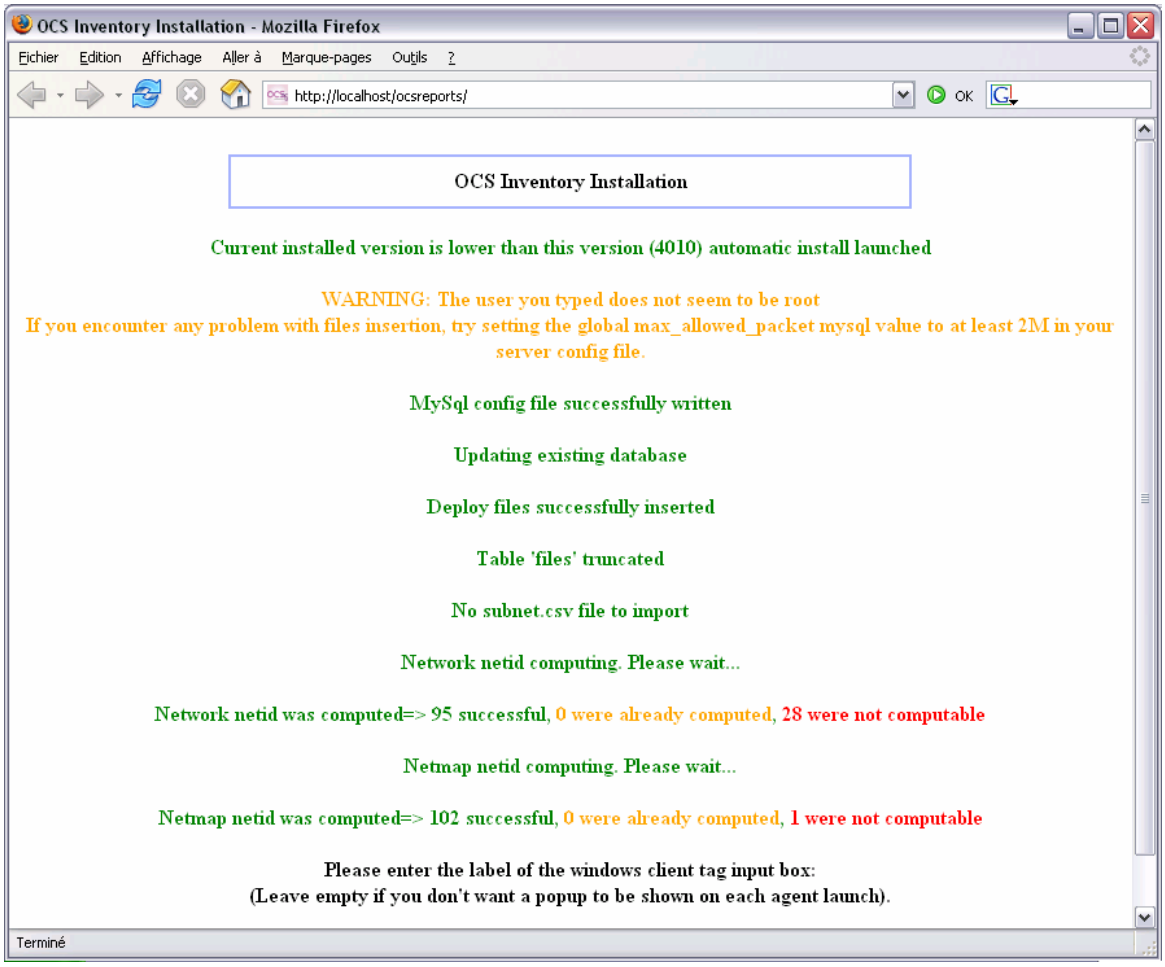


3.2.4 Upgrading management server.

Since version 1.0 RC2, installation of OCS Inventory NG Server for Windows is able to detect if XAMPP components are installed. If they are, they will not be upgraded, and only OCS components will be upgraded.

Run new OCS inventory NG Server for Windows setup, as described in § 3.2.1 Installing management server., **taking care to select the same installation folder as your previous installation**.

Point your favorite web browser to URL “http://administration_server/ocsreports/install.php” to re-run configuration of management server as described in § 3.2.2 Configuring management server.



Finally, you may fill in a text describing the TAG if you wish to use it.

4 Setting up agent on client computers.

There are 2 methods to inventory a client computer using OCS Inventory NG agent:

- ✓ If the client computer cannot connect to the Communication server, inventory is done locally and is stored in a XML compressed file with ".ocs" extension. User can then send this file through email, USB disk or any other way to the administrator, which will import it in the database through the Administration server.
- ✓ If the client computer can reach using HTTP protocol the Communication server through the network, agent ask the Communication server for inventory parameters and send inventory results directly to the Communication server.

4.1 Under Windows Operating Systems.

There is 2 way to deploy OCS Inventory NG agent on Windows powered computers.

Download and unzip OCSNG_WINDOWS_AGENT_1.0-XX.zip (where XX is the last release version, like 1.0-RC2). This package contains 3 files:

- ✓ OcsLogon.exe, launcher of OCS Inventory NG agent to be used when deploying the agent through a login script or Active Directory GPO in the domain. If agent is already installed, it just runs the agent. Otherwise, it downloads agent's binaries from Administration server, setup it and launch it.
- ✓ OcsAgent.exe, setup for installing OCS Inventory NG agent locally or running a local inventory on non network connected computers.
- ✓ Update_XXXX.zip, file to import in Administration server to automatically deploy the new release on computers where agent is already installed.

NB: If you are upgrading from Windows agent version 4.0.0.1 or 4.0.0.2 to version 4.0.1.0 or newer, because of bug fixes in automatic update process in previous, you cannot use automatic deployment feature in administration server. You must use launcher "OcsLogon.exe" with command line switch "/DEPLOY:4014".

4.1.1 Deploying the agent through login script.

Launcher "OcsLogon.exe" will try to connect by default to the Communication server using a DNS name "ocsinventory-ng", like if you open your favorite web browser and enter the URL http://ocsinventory-ng/ocsinventory.

To use a different URL if you cannot add this DNS name, just rename "OcsLogon.exe" with the DNS name or IP address of the Communication server (for example "commincation-server.domain.tld.exe" or "ocsinventory.domain.tld.exe" or "10.37.98.2.exe"). Launcher then will try to connect to the DNS name or IP address you've named it

(http://communication_server.domain.tld/ocsinventory or http://ocsinventory.domain.tld/ocsinventory or http://10.37.98.2/ocsinventory).

NB: Always use last version of OcsLogon.exe. You can get it from last package OCS-NG_WINDOWS_AGENT_1.0-XX.zip.

Copy files "OcsLogon.exe" (or the renamed one) to a shared folder somewhere in your network. This folder must readable by all your users. Then add a call to "OcsLogon.exe" (or to the renamed one) in the login script of your users.

```
@echo of
echo Running system inventory, please wait…
REM Call to OCS Inventory NG agent for deployment
REM Using shared folder MY_SHARE on server MY_SERVER
REM Connecting to Communication server 10.37.98.2
"\\MY_SERVER\MY_SHARE\10.37.98.2.exe"
echo Done. Thanks a lot.
```

Figure 4: Sample login script for Windows domain

NB: To be compliant with Windows 9X, you must enclose path to renamed launcher between quotes in the script, otherwise Windows 9X will not use long filename, but sort name like "103798~1.exe" and launcher will not be able to find correct IP address or DNS name.

Launcher will contact Administration server in HTTP to download latest agent binaries and setup locally the agent on the computer in the folder "C:\ocs-ng" or, if the locally connected user do not have permission to create folder in the root directory, in the folder "ocs-ng" in the user's temporary directory. It will also write a configuration file "OCSInventory.dat" in the agent folder where it will put configuration options downloaded from the Communication server. Then, it will launch OCS Inventory NG agent.

NB: since version 4.0.1.0 of Windows agent, configuration file "OCSInventory.dat" in now encrypted and cannot be edited manually.

If agent is already installed, launcher will just run the agent.

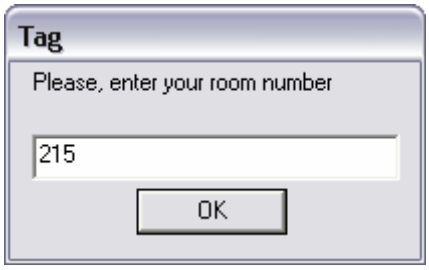
If agent is not up to date, it will download and setup agent's new release, then launch agent.

OCS Inventory NG agent begins by contacting Administration server in HTTP to query if inventory is needed and to download inventory parameters.

NB: Launcher OcsLogon.exe may encounter problems accessing the Communication Server if you have configured a proxy with authentication in Microsoft Internet Explorer settings. You can force Launcher to not use proxy with "/np" command line switch. You can also specify a

different IP port to use for Communication server with "/pnum:XX" command line switch, where XX is the IP port number to use. See § 4.1.3 Agent's command line switches.

When launched for the first time, OCS Inventory NG agent will prompt the user for the TAG value (if this feature is enabled). Help text displayed in the dialog-box is the one you've entered in § 3.1.4 Configuring management server. User may enter this value, or leave it blank (you will be able to update this value through the Administration server).



Then (or otherwise if TAG feature is not enabled), it will do the inventory and send in HTTP inventory results to Communication server.

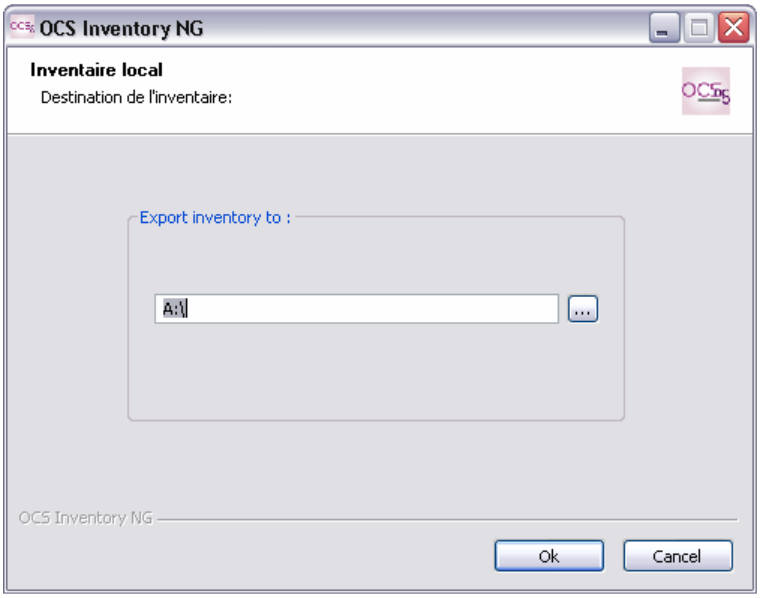
4.1.2 Installing the agent manually on a non network connected computer.

Setup can be run by a normal user, or better by a system administrator.

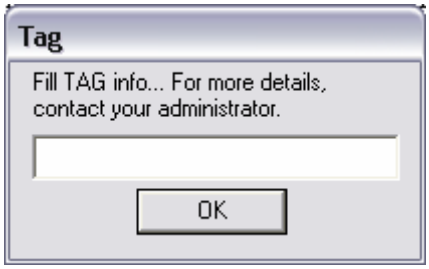
You just have to run file "OcsAgent.exe /local" to launch OCS Inventory NG agent's setup. Setup will try to install OCS Inventory NG agent's files in the folder "C:\ocs-ng" or, if the locally connected user do not have permission to create folder in the root directory, in the folder "ocs-ng" in the user's temporary directory. It will write a configuration file "OCSInventory.dat" in the agent folder where it will put default configuration options. Then, it will launch OCS Inventory NG agent.

NB: since version 4.0.1.0 of Windows agent, configuration file "OCSInventory.dat" in now encrypted and cannot be edited manually.

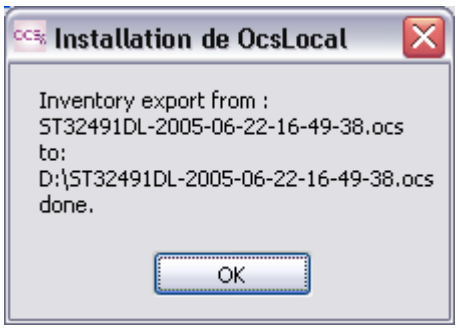
Agent will then prompt user for folder where to store inventory results.



When launched for the first time, OCS Inventory NG agent will prompt the user for the TAG value User may enter this value, or leave it blank (you will be able to update this value through the Administration server).



When inventory is finished, agent will display to user a message showing where the file name inventory results have been stored.



User then just has to send this file to administrator. Administrator will be able to import inventory results into the database through the Administration server.

If you want to run another inventory, you just have to rerun “OcsLogon.exe /local” from OCS Inventory NG agent’s installation folder.

4.1.3 Agent's command line switches

OCS Inventory NG Agent version 4.0.1.0 or higher includes some command line switches to allow detecting errors.

When using launcher "OcsLogon.exe" to deploy agent or run the agent, you can use the following command line switches.

- ✓ **/np**: disable use of proxy defined in Internet Explorer settings.
- ✓ **/pnum:X**: specify an IP port X for web communication server. By default, HTTP port 80 is used. You can force use of port 8080 for example with the argument /pnum:8080.
- ✓ **/local**: run agent in local inventory mode. So agent does not try to connect to Communication server. A file "{hostname}.ocs", containing inventory results in compressed XML, will be created in agent's directory.
- ✓ **/file**: Same as /local, but with interaction with Communication server.
- ✓ **/xml**: Agent will create a non compressed XML file "{hostname}.xml", containing inventory results, in his directory. If not used in conjunction with /LOCAL, agent tries to connect to Communication server.
- ✓ **/notag**: client does not ask user for TAG value.
- ✓ **/hkcu**: force agent to search for installed software also under HKEY_CURRENT_USER registry hive.
- ✓ **/deploy:XXXX:** force deployment of a specific agent version XXXX. Use "/DEPLOY:4014" (lastest version) to upgrade agent version 4.0.0.1 or 4.0.0.2.
- ✓ **/debug**: create a log file "{hostname}.log" in agent's directory.
- ✓ **/force:** force agent to always send inventory results, independently of the FREQUENCY parameter.
- ✓ **/uid:** force agent to generate a new deviceid.
- ✓ **/dmi**: If computer serial number cannot be retrieved with WMI, force agent to use DMI tables while running "BiosInfo.exe" tool. Otherwise agent tries first BIOS functions and then DMI tables.
- ✓ **/biosfunc**: If computer serial number cannot be retrieved with WMI, force agent to use BIOS functions while running "BiosInfo.exe" tool. Otherwise agent tries first BIOS functions and then DMI tables.
- ✓ **/conf:[filename]**: tells agent to use "[filename]" as configuration file. Otherwise it will use default "Ocsinventory.dat" file.
- ✓ **/test**: agent only tests HTTP connection to communication server and write a file "ok.ok" if all is good. May be only used with /DEBUG, /NP et /PNUM switches (disable all other switches).
- ✓ **/ipdisc:[network number]**: force agent to run IPDISCOVERY feature on network numbered "[network number]" if server ask an inventory. May be used in conjunction with /force to ensure it will run. Cannot be used with /local.
- ✓ **/fastip:** agent only scan 5 IPs if it is elected as IPDISCOVER host (only usable for debug or test, may not be used in production)

Once agent is installed, you can run it manually to diagnose problems. Use "C:\ocs-ng\OCSInventory.exe [options]" command line where [options] may be in the following command line switches.

- ✓ **/server:[server name]:** tells agent to connect to server "[server name]".
- ✓ **/np**: disable use of proxy defined in Internet Explorer settings.
- ✓ **/pnum:X**: specify an IP port X for web communication server. By default, HTTP port 80 is used. You can force use of port 8080 for example with the argument /pnum:8080.
- ✓ **/local**: run agent in local inventory mode. So agent does not try to connect to Communication server. A file "{hostname}.ocs", containing inventory results in compressed XML, will be created in agent's directory.
- ✓ **/file**: Same as /local, but with interaction with Communication server.
- ✓ **/xml**: Agent will create a non compressed XML file "{hostname}.xml", containing inventory results, in his directory. If not used in conjunction with /LOCAL, agent tries to connect to Communication server.
- ✓ **/notag**: client does not ask user for TAG value.
- ✓ **/hkcu**: force agent to search for installed software also under HKEY_CURRENT_USER registry hive.
- ✓ **/debug**: create a log file "{hostname}.log" in agent's directory.
- ✓ **/force:** force agent to always send inventory results, independently of the FREQUENCY parameter.
- ✓ **/uid:** force agent to generate a new deviceid.
- ✓ **/dmi**: If computer serial number cannot be retrieved with WMI, force agent to use DMI tables while running "BiosInfo.exe" tool. Otherwise agent tries first BIOS functions and then DMI tables.
- ✓ **/biosfunc**: If computer serial number cannot be retrieved with WMI, force agent to use BIOS functions while running "BiosInfo.exe" tool. Otherwise agent tries first BIOS functions and then DMI tables.
- ✓ **/conf:[filename]**: tells agent to use "[filename]" as configuration file. Otherwise it will use default "Ocsinventory.dat" file.
- ✓ **/test**: agent only tests HTTP connection to communication server and write a file "ok.ok" if all is good. May be only used with /DEBUG, /NP et /PNUM switches (disable all other switches).
- ✓ **/ipdisc:[network number]**: force agent to run IPDISCOVERY feature on network numbered "[network number]" if server ask an inventory. May be used in conjunction with /force to ensure it will run. Cannot be used with /local.
- ✓ **/fastip:** agent only scan 5 IPs if it is elected as IPDISCOVER host (only usable for debug or test, may not be used in production)

4.2 Under Linux Operating Systems.

OCS Inventory NG agent for Linux can only be setup locally. You cannot deploy the agent through the network as it's possible for Windows agent. However, you can choose during setup to activate auto-update of the agent if you've chosen HTTP inventory method.

You must have root privileges to setup Administration server.

OCS Inventory NG Agent for Linux requires PERL 5.6 or higher, and the 3 following modules:

- ✓ Perl module XML::Simple version 2.13-1 or higher
- ✓ Perl module Compress::Zlib version 1.34-1 or higher
- ✓ **Perl module Net::IP version 1.24 or higher**

NB: Linux agent version 8 or higher requires PERL module Net::IP version 1.24 or higher. It also includes a new version 2 of binary ipdiscover.

Download them from http://search.cpan.org:

Install XML::Simple module.

- ✓ tar –xvzf XML-Simple-2.14.tar.gz
- ✓ cd XML-Simple-2.14
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install Compress::Zlib module.

- ✓ tar –xvzf Compress-Zlib-1.34.tar.gz
- ✓ cd Compress-Zlib-1.34
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Install Net::IP module.

- ✓ tar –xvzf Net-IP-1.24.tar.gz
- ✓ cd Net-IP-1.24
- ✓ perl Makefile.PL
- ✓ make
- ✓ make test
- ✓ make install

Download “OCSNG_LINUX_AGENT_1.0-XX.tar.gz” from OCS Inventory Web Site (where XX is last release version, like 1.0-RC2).

Unpack it.

- ✓ tar –xvzf OCSNG_LINUX_AGENT_1.0-XX.tar.gz

Run OCS Inventory NG agent installer to setup agent in “/etc/ocsinventory-client” directory.

- ✓ cd OCSNG_LINUX_AGENT_1.0-XX
- ✓ perl ocsinventory-installer.pl

You will then have to choose between 2 methods for generating inventory:

1. http: computer is connected to the network and is able to reach the Communication server with HTTP protocol.
2. local: computer is not connected to the network and inventory will be generated in a file to send to administrator.

4.2.1 Installing the agent on a network connected computer.

To the question "Which method will you use to generate the inventory (http/local):", answer "http" and then, specify IP address or DNS name of the Communication server.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Wich method will you use to generate the inventory (http/Local): http

Server name : 10.37.98.2
```

Then, indicate if you wish to use auto update of the agent feature. Answer "y" to activate auto update, "n" if you do not wish. You will also be able to enable/disable this feature trough the Administration server for all computers.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Will you activate the auto-update ? (y/n) : y
```

Setup will then prompt you for the TAG value. Type in the requested value, or leave field blank if you do not wish to use TAG value and press Enter.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Type the tag or return : 210
```

Finally, setup will show you all your inputs and will ask you to validate them. Answer "y" to validate and launch inventory, "n" to restart setup process from the beginning.

```
############################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
############################################################


Your inputs :

     Generating method   = http
     Server name         = 10.37.98.2
     Auto-update         = on

     tag = 210

Do you confirm ?  (y/[n]) : y

Terminated :-)
Wed Jun 22 17:25:07 2005 => Transmission...done.
Wed Jun 22 17:25:07 2005 => Account infos up to date
Wed Jun 22 17:25:07 2005 => No update
Wed Jun 22 17:25:07 2005 => Terminated... :-)
Wed Jun 22 17:25:07 2005 => Execution time : 15 secs
```

Setup is now finished and inventory has been run for the first time, results sent to the Communication server.

Setup has done the following tasks:

- ✓ install OCS Inventory NG agent configuration files in directory "/etc/ocsinventory-client",
- ✓ install OCS Inventory NG agent binary files in directory "/usr/sbin",
- ✓ added a cron daily task "ocsinventory-client" in directory "/etc/cron.d",
- ✓ created a log directory "/var/log/ocsinventory-client" where OCS inventory NG will put his logs,
- ✓ added a logrotate task "ocsinventory-client" in directory "/etc/logrotate.d",
- ✓ added a symbolic link "ocsinv" in directory "/bin" to allow you running the agent manually.

A configuration file "ocsinv.conf" has also been created in the directory "/etc/ocsinventory-client", which contains all parameters for the agent.

```
<CONF>
 <DEVICEID>linux.domain.tld-2005-06-22-18-25-36</DEVICEID>
 <DMIVERSION>1</DMIVERSION>
 <OCSFSERVER>10.37.98.2</OCSFSERVER>
 <UPDATE>1</UPDATE>
</CONF>
```

Figure 5 : Sample agent's configuration file ocsinv.conf for a network connected computer.

4.2.2 Installing the agent on a non network connected computer.

To the question “Which method will you use to generate the inventory (http/local):”, answer “local”.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Wich method will you use to generate the inventory (http/Local): local
```

Then, indicate if you wish to use auto update of the agent feature. Answer “n” because agent is not able to download new release from the Communication server.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Will you activate the auto-update ? (y/n) : n
```

Setup will then prompt you for the TAG value. Type in the requested value, or leave field blank if you do not wish to use TAG value and press Enter.

```
##########################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
##########################################################


Type the tag or return :
```

Finally, setup will show you all your inputs and will ask you to validate them. Answer “y” to validate and launch inventory, “n” to restart setup process from the beginning.

```
############################################################
#INSTALLATION SCRIPT FOR OCSINVENTORY LINUX AGENT#
############################################################


Your inputs :

      Generating method   = local
      Auto-update         = off

      tag =

Do you confirm ?  (y/[n]) : y

Terminated :-)

      Choose your target directory ? :  /root
Wed Jun 22 17:59:16 2005 => Inventory generated...
Wed Jun 22 17:59:16 2005 => Terminated... :-)
Wed Jun 22 17:59:16 2005 => Execution time : 17 secs
```

Setup is now finished and inventory has been run for the first time. Because you're in "local" mode, agent prompts you for entering the directory where to store inventory result file (file named with name of computer, date of inventory and ".ocs" extension). Enter the directory and then go into to send the file to OCS Inventory administrator.

Setup has done the following tasks:

- ✓ install OCS Inventory NG agent in directory "/etc/ocsinventory-client",
- ✓ created a log directory "/var/log/ocsinventory-client" where OCS inventory NG will put his logs,
- ✓ added a logrotate task "ocsinventory-client" in directory "/etc/logrotate.d",
- ✓ added a symbolic link "ocsinv" in directory "/bin" to allow you running the agent manually.

A configuration file "ocsinv.conf" has been created in the directory "/etc/ocsinventory-client", which contains all parameters for the agent.

```
<CONF>
  <DEVICEID>linux.domain.tld-2005-06-22-18-40-54</DEVICEID>
  <DMIVERSION>1</DMIVERSION>
  <OCSFSERVER>local</OCSFSERVER>
</CONF>
```

Figure 6 : Sample agent's configuration file ocsinv.conf for a non connected computer.

4.2.3 Agent's command line switches

If you encounter error, agent's produce a log file in directory "/var/log/ocsinventory-client".

However, agent's also support some command line switches. You can use them while launching the agent manually "/etc/ocsinventory-client/ocsinventory-client-1.0b.pl"

- ✓ **-local**: runs the agent in local mode, without any connection to communication server. You will be prompted for a target directory where agent will put inventory results in XML compressed file with ".ocs" extension.
- ✓ **-xml**: Agent will create a non compressed XML file with ".ocs" extension, containing inventory results. You will be prompted for a target directory where agent will put the file. If not used in conjunction with -local, agent tries to connect to communication server.
- ✓ **-debug:** force agent to produce a more detailed log file, showing XML exchange with communication server.

5 Administration of OCS Inventory NG.

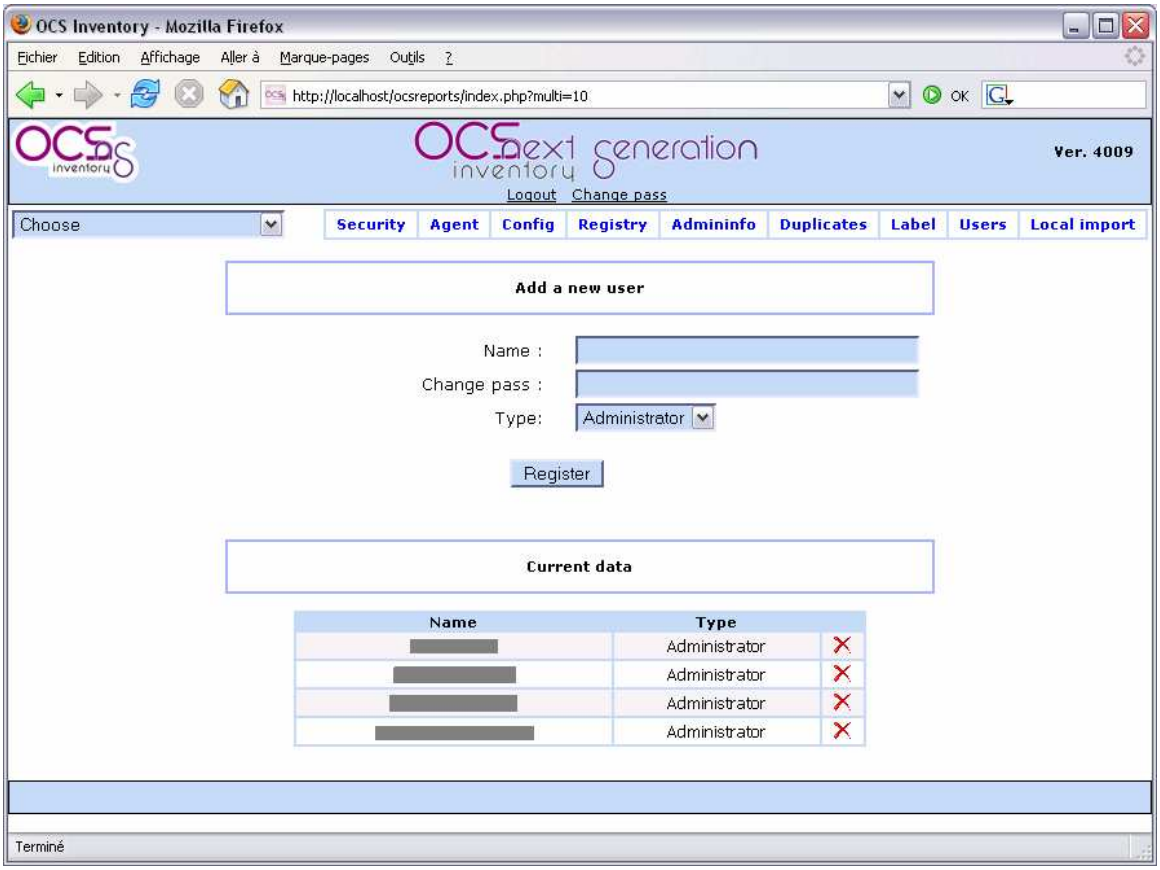
Point your browser to the URL "http://administration_server/ocsreports" and login in with "admin" as login and "admin" as password.

You may at least change the password of the default administrator, or better, add a new one and remove the default one.

NB: All these features are only available to OCS Inventory NG administrators.

5.1 Managing OCS Inventory NG Administration server users.

Click on the toolbar "Users" menu to display all configured OCS Inventory NG Administration server users.



You can add new users by entering their name, password (user will be able to change it when logged in), and selecting their type. You can choose between:

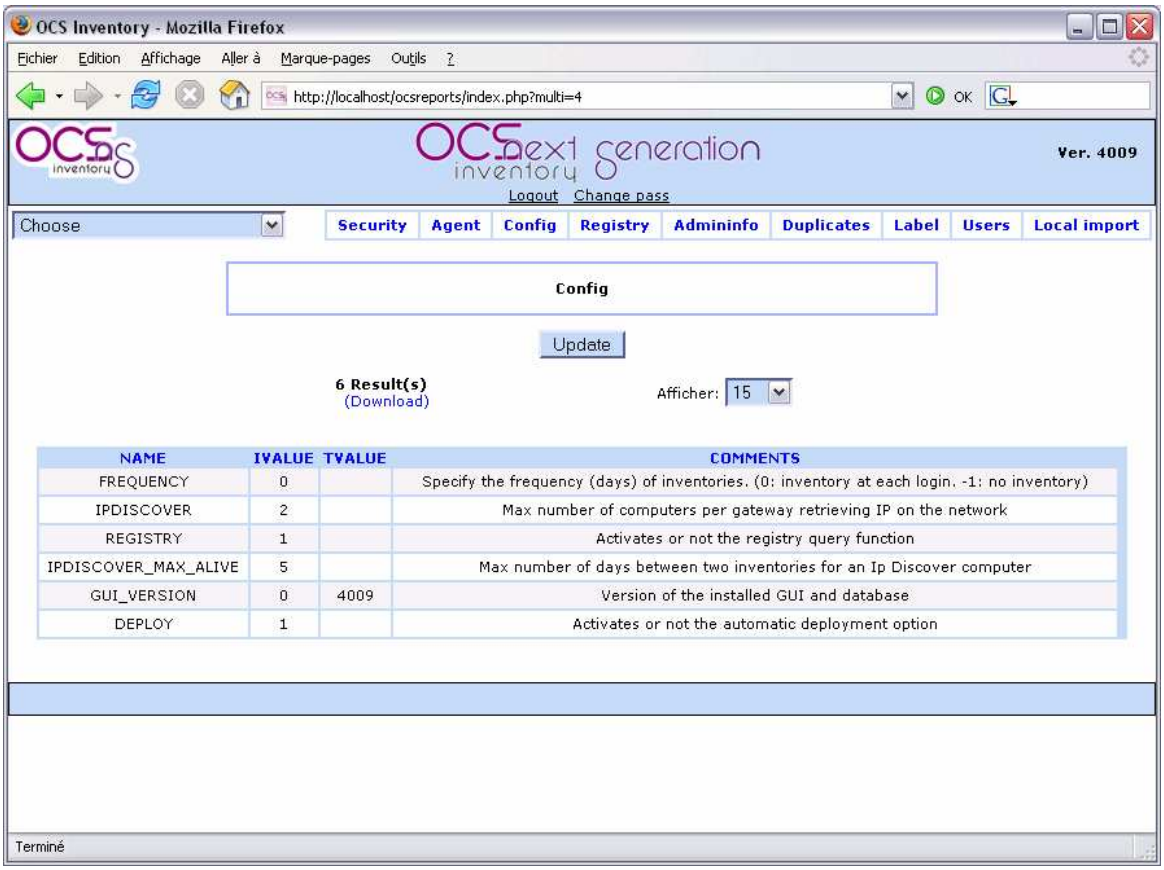
- ✓ Administrator: user has the ability to configure all parameters of the product.

- ✓ User: user can only query the database and view results of inventory. It just has the top left Combo-box of menu toolbar to run general queries.

To delete a user, just click on red cross at the end of the corresponding line.

5.2 Managing OCS Inventory NG general options.

Click on the toolbar “Config” menu to display all general options.



NAME	IVALUE	TVALUE	COMMENTS
FREQUENCY	0		Specify the frequency (days) of inventories. (0: inventory at each login. -1: no inventory)
IPDISCOVER	2		Max number of computers per gateway retrieving IP on the network
REGISTRY	1		Activates or not the registry query function
IPDISCOVER_MAX_ALIVE	5		Max number of days between two inventories for an Ip Discover computer
GUI_VERSION	0	4009	Version of the installed GUI and database
DEPLOY	1		Activates or not the automatic deployment option

Each option can have an integer value (field “IVALUE”) or a string value (field “TVALUE”).

Actually, no option use a string value, but perhaps in the future?

You can change the value of each option by clicking the “Update” button.

Then click on the option name you want to update, click “Cancel” button to return to view only mode.

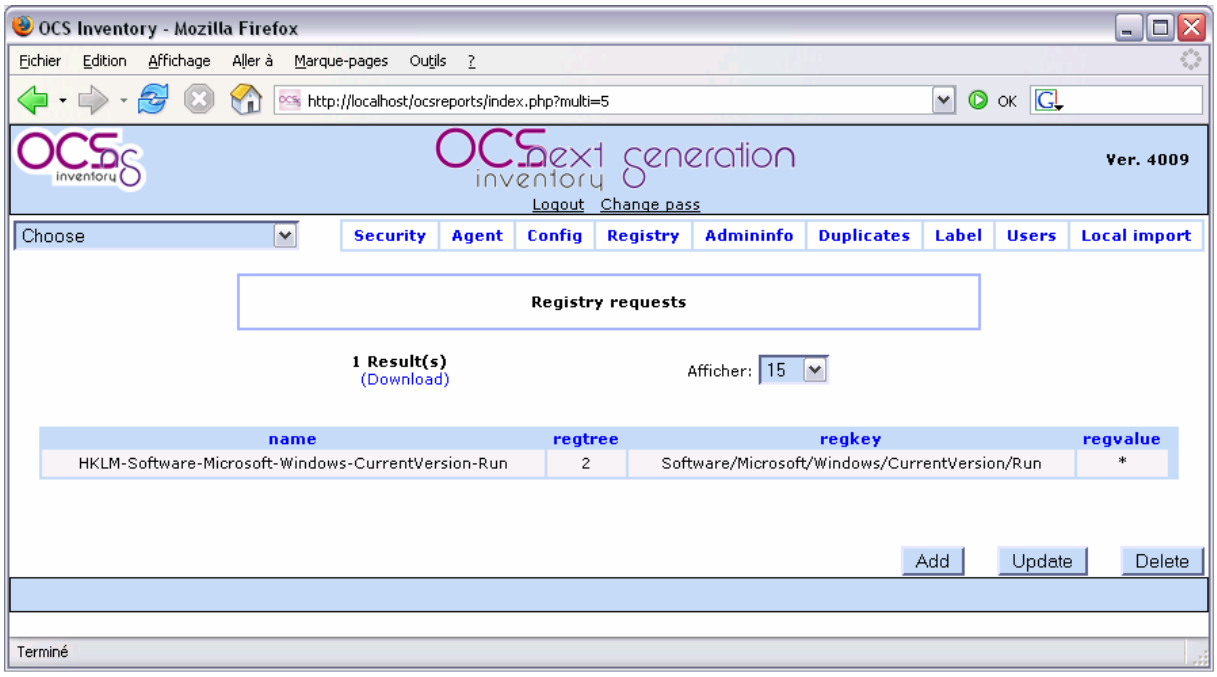
- ✓ DEPLOY: Activates (IVALUE = 1) or not (IVALUE = 0) the automatic deployment of new agent release option.
- ✓ FREQUENCY: Specify the frequency in days of inventories. Specific IVALUE field are 0 to run inventory at each login and -1 to disable inventory.
- ✓ IPDISCOVER: Specify the number (IVALUE field) of agent to ask running IP discovery feature for each gateway (sub network). If you leave the default value 2, this mean that the Communication server will ask the 2 most active computers of each sub network to run IP discovery feature.
- ✓ IPDISCOVER_MAX_ALIVE: Maximum number of days between two inventories for an IP Discovery enabled computer to hold his status of IP discovery computer (IVALUE field). An IP discovery enabled computer will lose his status if it has not been seen by the Communication server for more days than the number of days defined in this setting. Another computer in the same sub network will then be designated.
- ✓ REGISTRY: Activates (IVALUE = 1) or not (IVALUE = 0) the registry query function

5.3 Using Registry Query feature.

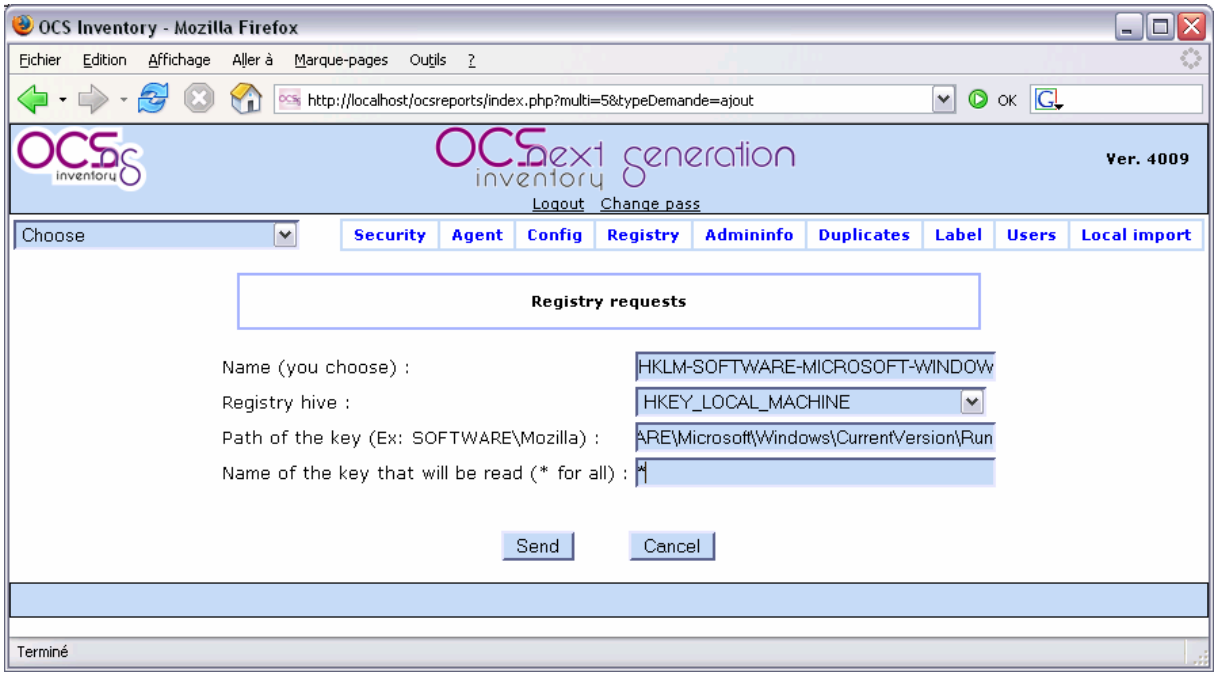
OCS Inventory NG agent for Windows is able to query the registry of inventoried computers for a value of a key or for all values of a key under registry hives HKEY_CLASSES_ROOT, HKEY_CURRENT_USER, HKEY_LOCAL_MACHINE, HKEY_USERS, HKEY_CURRENT_CONFIG (and HKEY_DYN_DATA for Windows 9X based computers).

You have to enable this feature in the general settings by specifying IVALUE field to 1 (0 to disable) for option “REGISTRY”.

You can then define your registry query by clicking “Registry” toolbar menu.



Click “Add” button to add a new query. Enter a name for this query, for example MS Office XP if you want to retrieve MS Office XP registration number, select the registry hive (HKEY_LOCAL_MACHINE in this example), enter the registry key (SOFTWARE\Microsoft\Office\10.0\Registration\{9011040C-6000-11D3-8CFE-0050048383C9}) and the value name to query (ProductID) and validate. Put star (*) in field “Name of the key” to get all values of the key (This is useful to get all values of key “HKLM\Software\Microsoft\Windows\CurrentVersion\Run” to know which process are automatically started for example).



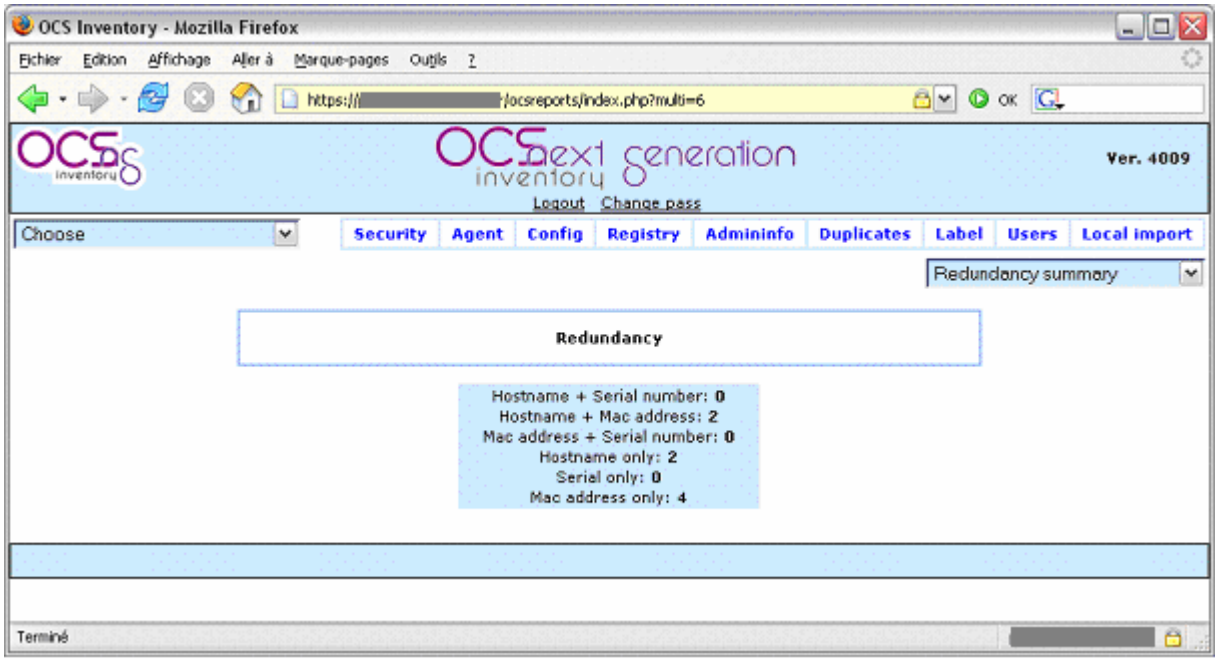
After that, each time a Windows client connects; it will retrieve and store all the values corresponding to these keys.

5.4 Managing duplicates computers.

OCS Inventory NG is able to detect a renamed computer, reinstalled computer…

Generally, it will handle that alone. But sometimes, it is impossible for the server to know whether two computers are the same or not, for example when it has no network adapter (no Mac address) or when the serial number was not properly set by the constructor (If you change a computer's name, the application won't be able to recognize it if it has no serial or no Mac address, and thus a duplicate fake computer may be created).

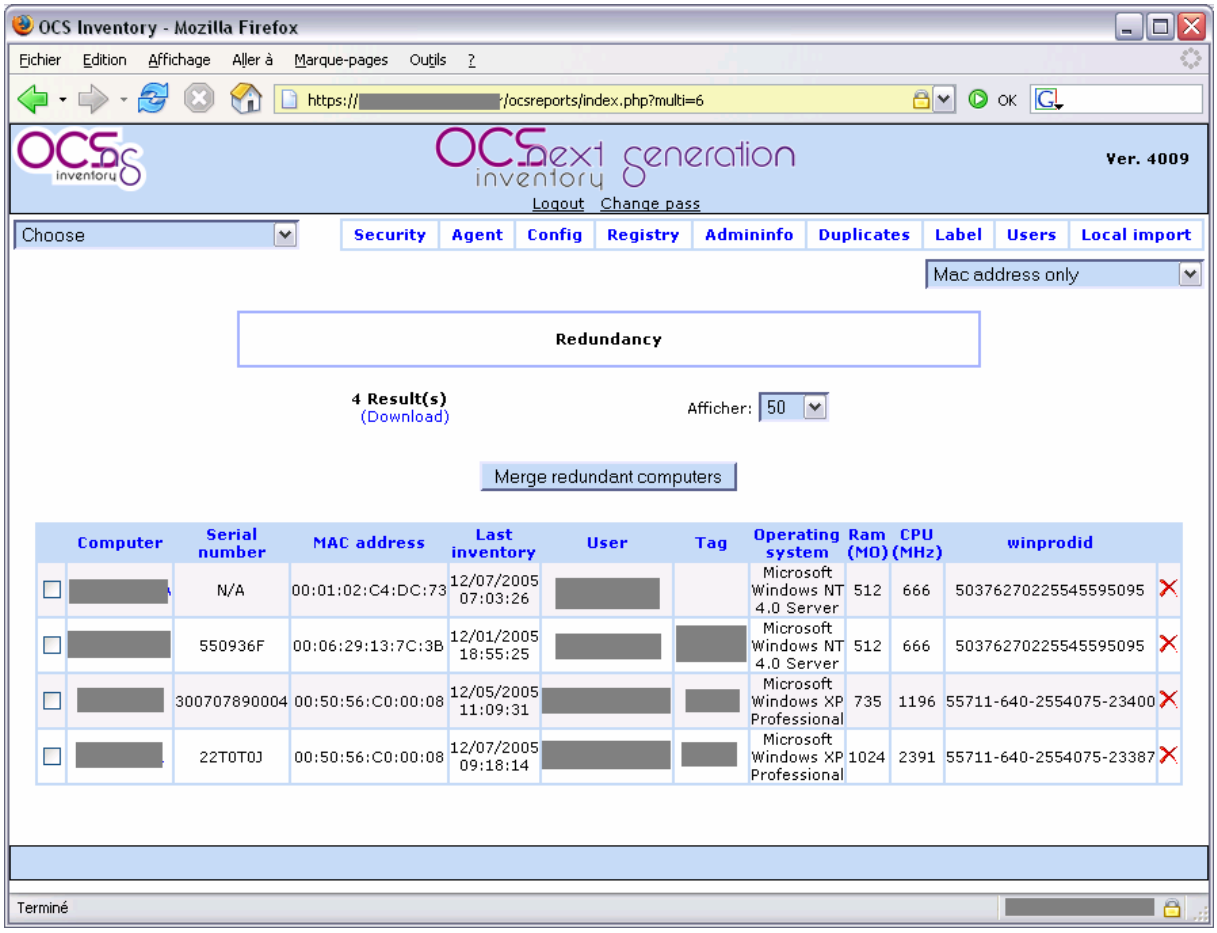
This page accessible by clicking "Duplicates" toolbar menu is used to solve this problem.



You may choose the kind of comparison you want in the top right combo-box.

- ✓ Redundancy summary – Shows the number of redundant computers detected with each comparison method.
- ✓ "Hostname + Serial number", "Hostname + Mac address", "Mac address + Serial number" - These are the two criteria comparison methods, the more reliable. It returns all computers that have two criteria in common.
- ✓ "Hostname only", "Serial only", "Mac address only" - These are the one criterion comparison methods; it only shows all computers that shares one parameter.

Once computers are shown, it's up to you to check whether several computers are redundant or not.



After that, you only have to select (checkbox) computers that look the same, and click “merge redundant computers”: all the data from checked computers will be merged.

The administrative data of the oldest computer are kept on the merged device.

PS: When those filters are applied, some values are filtered out (For example: 'NNNNNNN' or 'xxxxxxxxxxx' for serial number).

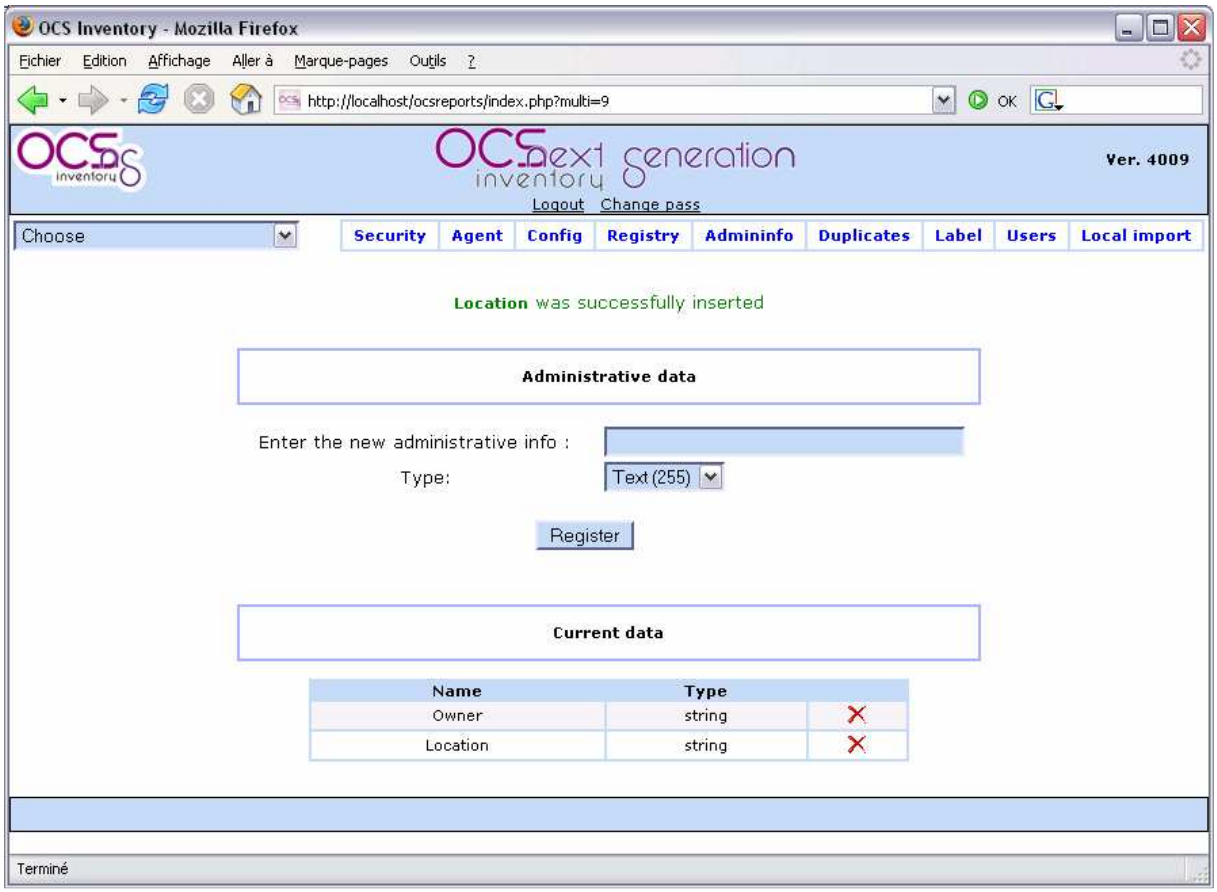
5.5 Editing administrative information.

OCS Inventory NG allows you to store custom information for each inventoried computers. For example, you can add administrative information to specify the owner of the computer, or the location of the computer.

This administrative information is stored both on the server and on the client to avoid any loss of data.

For example, if the database is lost, all clients will come back with their administrative information.

You can define the administrative information you want for each computer by clicking "Admininfo" toolbar menu.

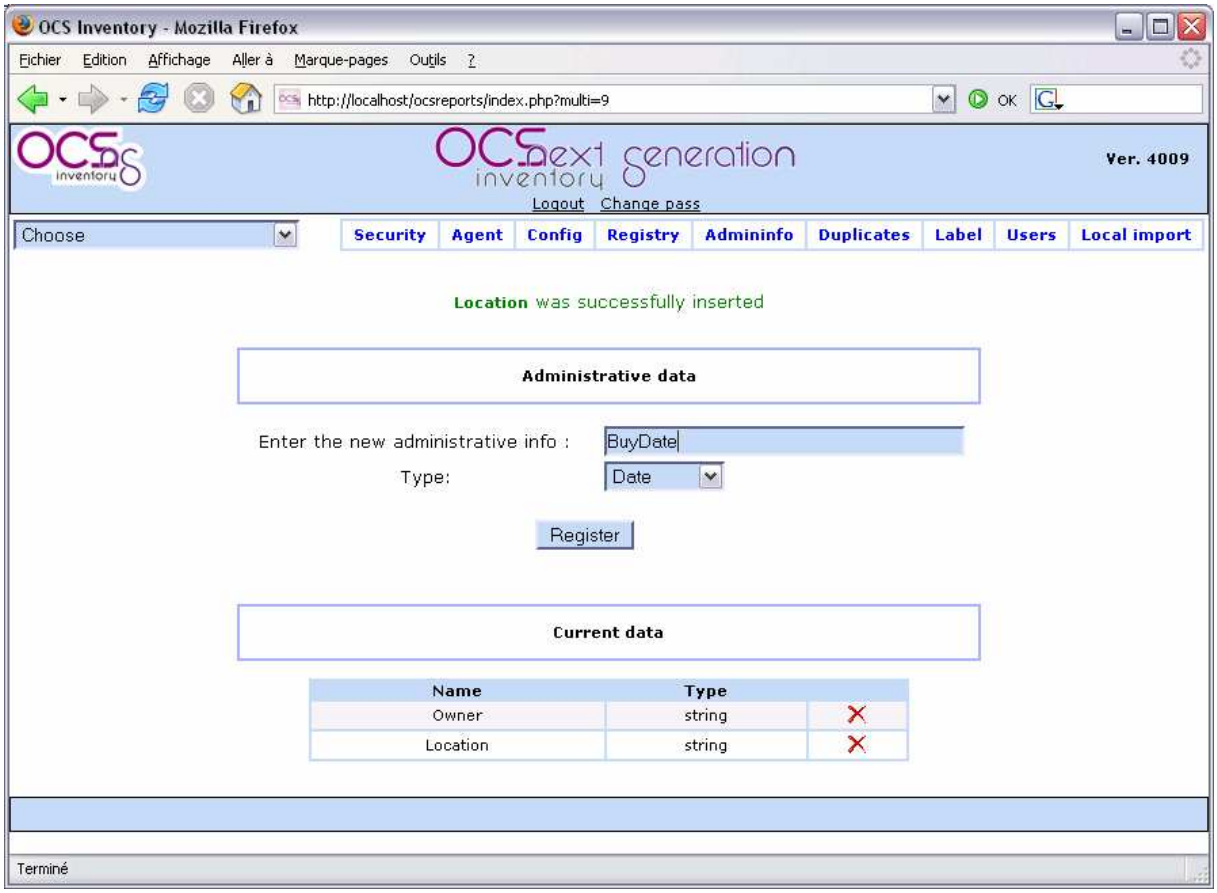


You can add new administrative information definition by entering their name (space or special characters are not allowed) and selecting their type. You can choose type between:

- ✓ Text.
- ✓ Integer.
- ✓ Real.
- ✓ Date.

To delete an administrative information definition, just click on red cross at the end of the corresponding line.

For example, we will add administrative information corresponding to the buy date of computer.



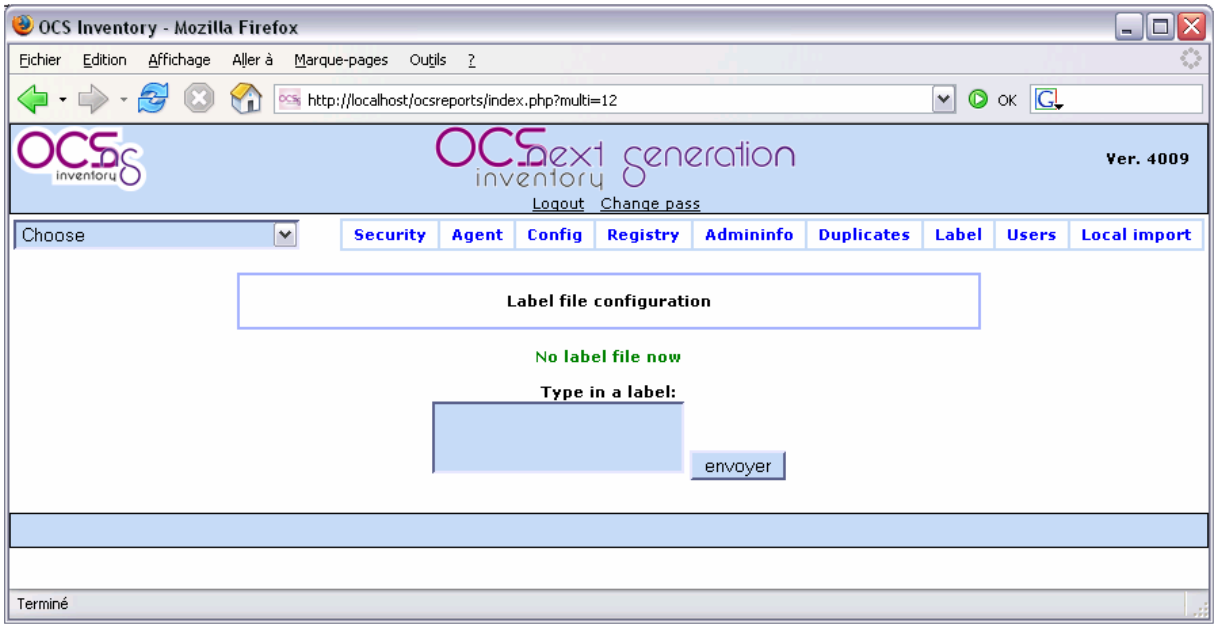
You can now browse all your computers to set the buy date for each.

5.6 Editing the label

If the “DEPLOY” option is activated, clients may get the “label” file. It is used to fill the popup shown on first start of a client.

This popup asks for the “TAG” value that is used to class computers (it may be, for example, a unit code, the name of one of your company’s section, a street number etc.)

This “label” file is generated during the server install, and may be edited by clicking “Label” toolbar menu.



If you submit a blank label, the label file will be deleted, and no window will be displayed anymore on client's computer.

5.7 Deploying automatically a new release of agent.

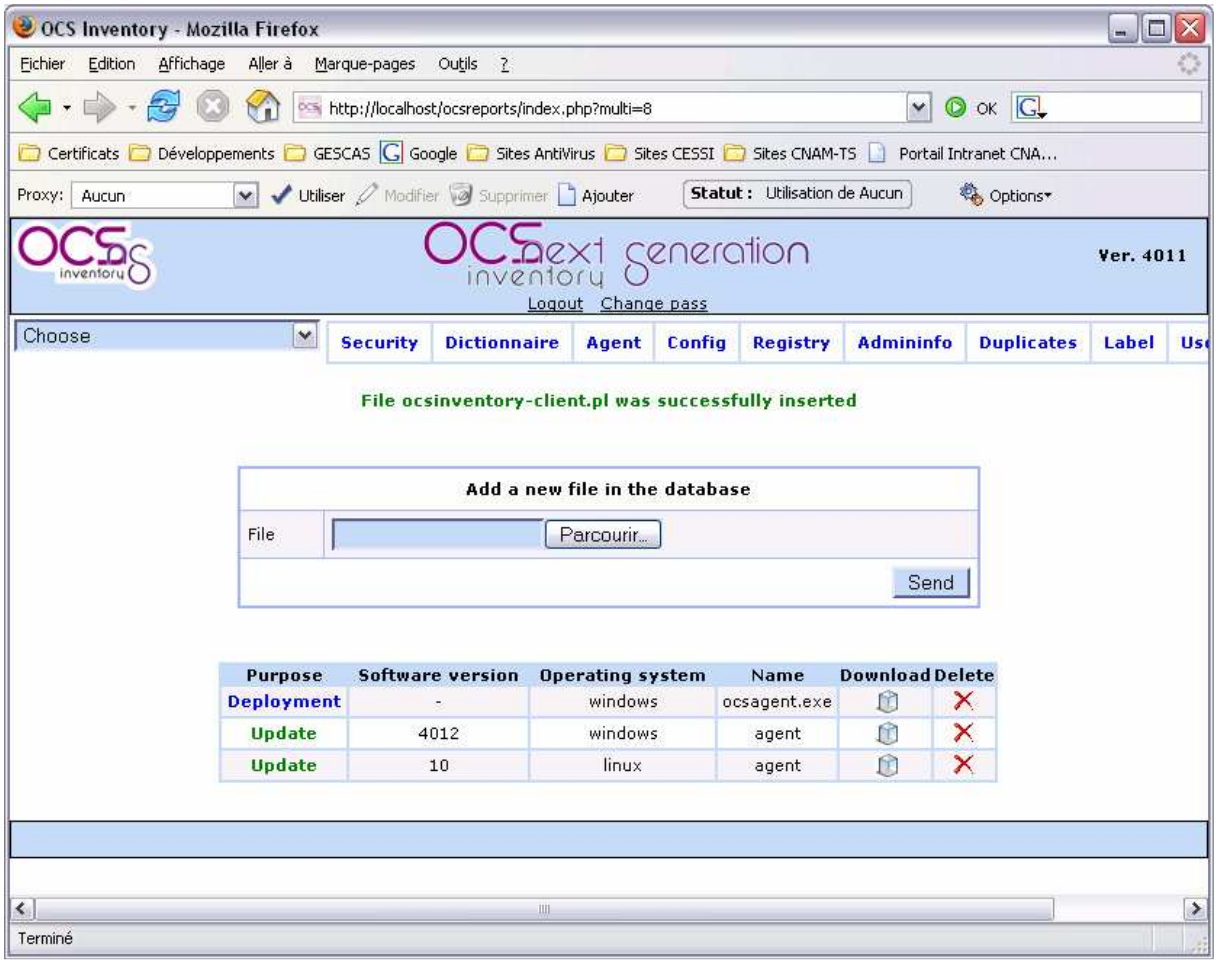
This feature works only for network connected computers able to connect to the Communication server.

NB: ZIP support in PHP is required to upload new release of Windows agent (see § 8.2.2 ZIP support). PHP request content length must also be at least 4 MB (see § 8.2.1 Requested content-length).

OCS Inventory NG is able to automatically deploy agent updates on inventoried computers from the Communication server.

You just have to upload the new release of agent into the database and to activate the deployment feature by setting the IVALUE of "DEPLOY" general option to 1 (see § 5.2 Managing OCS Inventory NG general options.).

Click "Agent" toolbar menu, browse your hard drive to select the new agent release and click "send" button.



Uploaded file must be one of the following:

- ✓ A zip file for Windows agent (use UPDATE_XXXX.zip file included in Windows agent package)
- ✓ A .pl file for Linux agent (use ocsinventory-client.pl file from Linux client package)
- ✓ A binary file (Any binary like dmidecode)

Version: The client must be a different version than the available ones. To know the .pl version, the interface looks for the "use constant VERSION" declaration in the script. For Windows, look at "Ocsinventory.exe" file properties, and check version tab.

Deployed clients will be updated with the higher version available, providing this version is different than the current one. Clients will test the updated version and will replace themselves with only if it WORKS.

NB: If you encounter error while uploading agent, refer to common errors § 8.2.1 Requested content-length)

5.8 Importing inventory for non network connected computers.

5.8.1 With Administration server through your web browser

For non network connected computers, you can import inventory results from a file created on the computer by the agent run in local mode (see § 4 Setting up agent on client computers.). We assume that you're able to save this file in your hard disk from your mailbox, or any other way.

Click "Local import" toolbar menu, browse your hard drive to select the ".ocs" file created by agent release and click "send" button.

5.8.2 With Communication server through a Perl script

Communication server provides the ability to import inventory from a file created on the computer. This file has ".ocs" extension.

We assume that administrator can get the file from somewhere, his mailbox, a USB drive or any other place.

Go to the directory where you've installed Communication server, "/usr/local/ocsinventory-NG" for us, and run the script "Ocsinventory_local.pl" with path to file which contains inventory results as argument.

This will import inventory results into the database.

```
[root@l16753101aao ocsinventory-NG]# ./Ocsinventory_local.pl ST32491DL-2005-06-23-10-04-02.ocs
OK for ST32491DL-2005-06-23-10-04-02.ocs
---------------------------
```

```
Successly inventoried : 1
Errors : 0
:-)
```

Figure 7 : Sample import of a single inventory results file.

If you have multiple files to import, you can put them in a directory and them launch the script “Ocsinventory_local.pl” without argument, but within the directory where resides files to import.

```
[root@l16753101aao home]# /usr/local/ocsinventory-NG/Ocsinventory_local.pl
OK for ST32491DL-2005-06-23-10-04-02.ocs
--------------------------
Successly inventoried : 1
Errors : 0
:-)
```

Figure 8 : Sample of multiple inventory results files in directory home.

5.9 Using IP discovery feature.

IP discovery feature allow OCS Inventory NG to discover all network connected devices on the network.

For this, Communication server asks a number of most “active” computers running OCS Inventory NG agent to scan for MAC addresses in their sub network at each run. **They will not scan the entire wide area network, but only their local network defined by the couple IP address/subnet mask.**

5.9.1 Introduction.

Inventory software is very useful for administrator. It allows “enlightening” his computers stock. Today, with use of TCP/IP, we can say that enlightenment is done at the same time for all the enterprise network, especially if, like OCS Inventory NG, working is natively network based.

But, what about devices which do not send inventory, for many reasons like a forgetting, a lack of cooperation from users? What about from all “alive” devices which cannot run inventory agent (printers, switches, routers, WiFi access points…)? What about computers which do not have to be connected on your network and which are conspicuous for their discretion?

IPDISCOVER try to answer to those problematic. Even if it can work independently, it matches perfectly to OCS structure. As working is based on a communication between all hosts of information system and a central server, it’s easy for the server to order at his

"subordinate" to make some little tasks, as getting registry key, doing an inventory or retrieving all devices answering on his IP segment.

5.9.2 How does it work ?

5.9.2.1 Retrieving information.

OCS NG system is based on a dialog between agents installed on computers and Apache module on OCS NG server. Exchange is done in compressed XML and allows configuring agent tasks.

When a computer send an inventory result, server try to determine if it needs some other computers (number can be configured) to scan hosts in this sub network. Gateway IP address are used to cartography enterprise network.

If it's needed, server estimate host quality and decide to activate or not host as an ipdiscover enabled computer. In this case, computer will send systematically an inventory, independently of general configuration parameter 'FREQUENCY'.

5.9.2.2 Election mechanism.

Once server has determined that there is a need for the selected gateway, it evaluates the following criteria:

- ✓ *OS*: operating system must be Windows XP or Windows 2000 (all versions) or Linux.
- ✓ *QUALITY*: this parameter means the host connection average to the server in days. It is evaluated dynamically by Communication server only when there is more than the number (defined by 'IPDISCOVER' option) of inventoried hosts for a gateway. If current computer sending inventory results has better quality than another IPDISCOVER enabled computer for this gateway, current computer will replace the other one. 'IPDISCOVER' option must be greater than zero to enable this feature!
- ✓ *FIDELITY*: total connection number to the server of the computer. This number must be at least 3, to allow QUALITY to be computed from representative data.
- ✓ *NETMASK*: sub network mask. It must describe a maximum of B class IP network (2 first bytes to 255 => 255.255.X.X).
- ✓ *LASTDATE*: when Communication server compute QUALITY, if it find a host which hasn't sent inventory results from number of days defined by 'IPDISCOVER_MAX_ALIVE' option, it will replace this host by a new one.

5.9.2.3 How do agents work?

Once agent has received order to proceed to discovery of his sub network, it identifies first network interface to use. It tries then to resolve through ARP all IP addresses answering on his segment. All devices answering to the question are stored in XML inventory result and sent to server.

5.9.2.4 Server tuning

When doing a new installation of OCS NG, we understand easily that it requires some times to be ready to enable ipdiscovery feature. It requires some times to grab all gateways and to elect computers for ipdiscovery. As a computer can only be elected if it REALLY provides an inventory, it may be wiser to configure at the beginning 'FREQUENCY' option to zero, always generate an inventory. You can increase this value later, when infrastructure will be ready.

Analyzing errors (thought ipdiscover-util.pl used directly or from web interface) will allow you to detect potential problems. More the value of QUALITY will be lesser, more your ipdiscover information will be up to date.

System will be giving you the best in a domain, with a daily authentication and inventory. Tests done with this configuration on 20 000 hosts and 250 sub networks generate a DAILY actualization of 15 000 IP addresses.

To finish, value set for IPDISCOVER will tell to server how much computers are wished by gateway to run this task (if you set this value to zero, feature will be disabled).

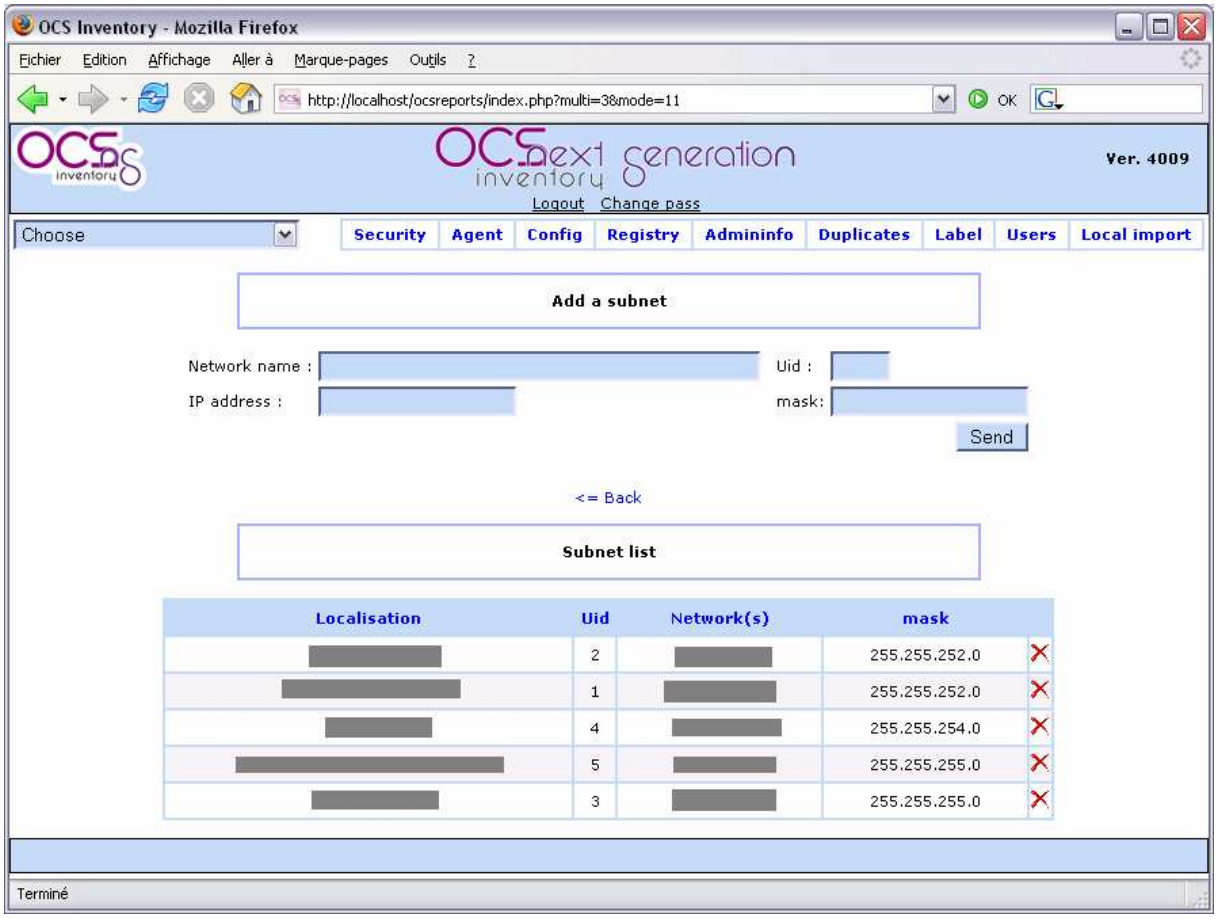
5.9.3 Working with results.

You can view which computers run the IP discovery scans by clicking on toolbar "Security" menu ("IpDisc" menu if some languages).

5.9.3.1 Manage names of your networks.

You may define your sub networks by a name and a unique ID, to view results easily.

Click on “Config” menu and then on “Subnet names” menu to manage your sub networks.

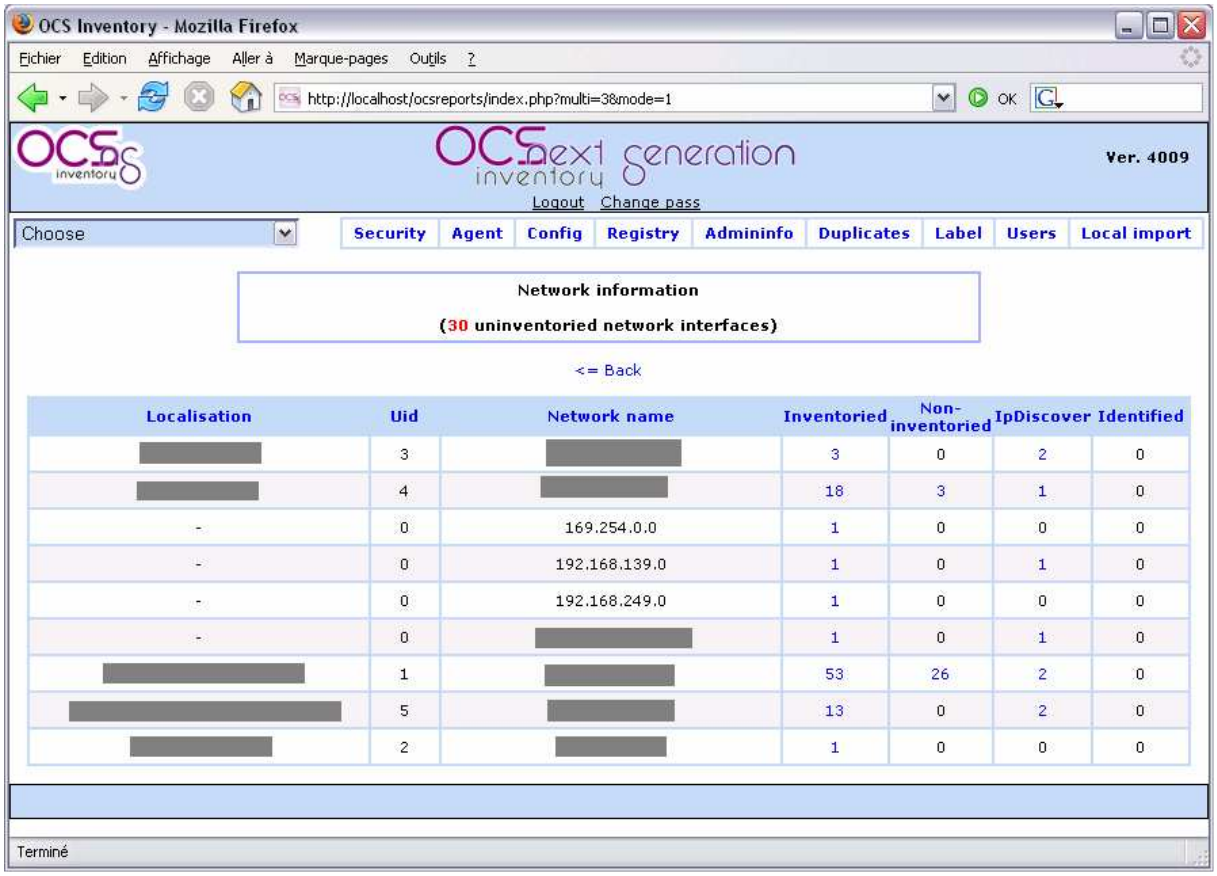


Enter sub network name (ex DMZ), ID, IP address and IP network mask, then click “Send” button to validate.

To remove a sub network definition, just click red cross at the end of corresponding line.

5.9.3.2 Show list of networks

You can view the list of sub network configured in your network by selecting “Network information” menu.

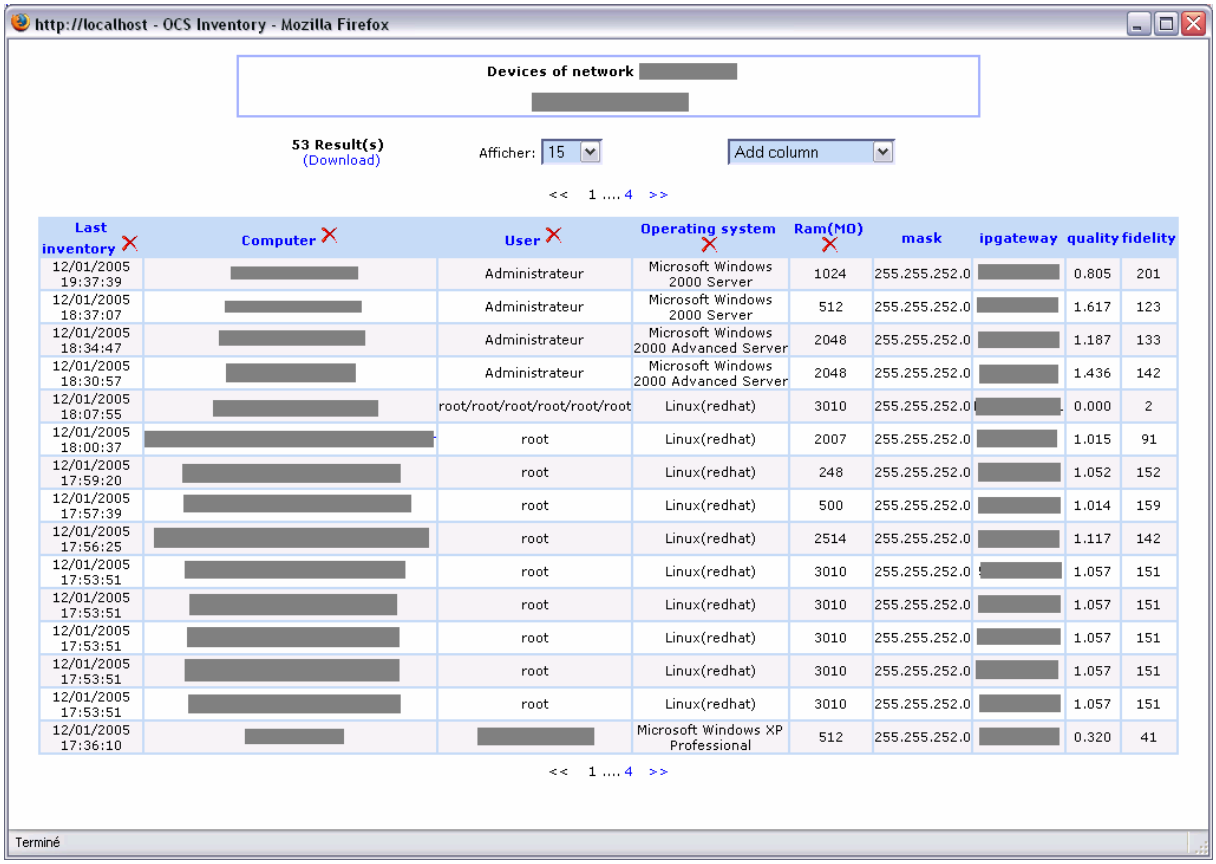


For each network, you will be able to view how many inventoried hosts, non inventoried hosts, IPDISCOVER feature enabled hosts and identified hosts (known hosts manually registered in the database) are connected to this network.

Click on the number of needed column to view each type of devices.

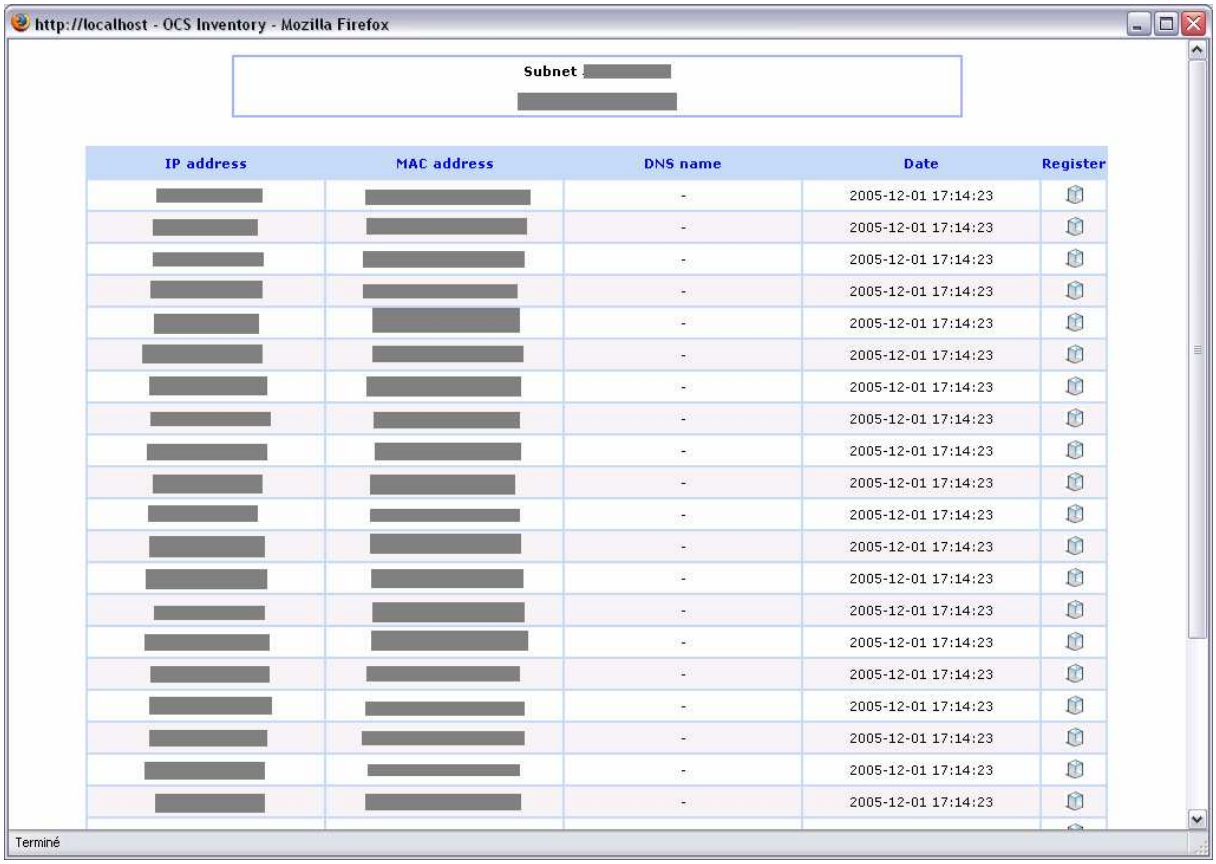
5.9.3.3 Show inventoried hosts in the network.

You can view the list of inventoried hosts on your network by clicking on number in column “Inventoried” in the network list.



5.9.3.4 Show uninventoried network devices.

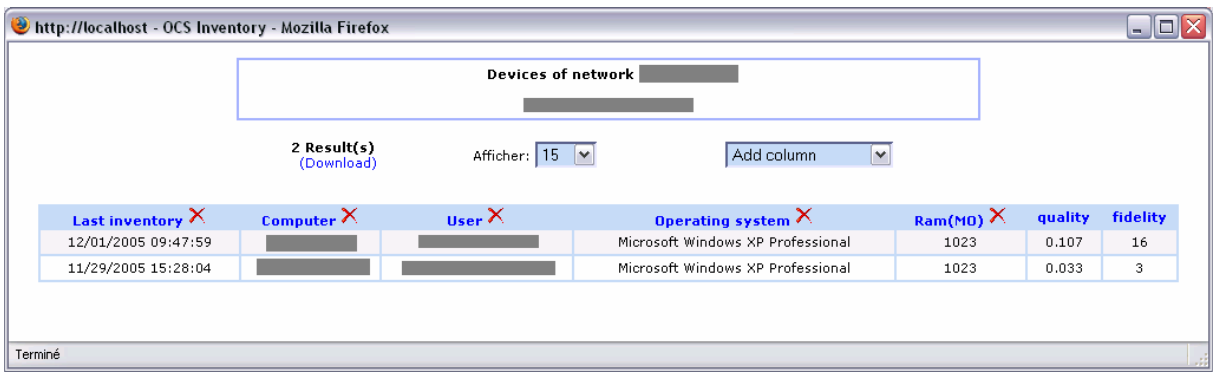
You can view the list of active network devices detected with IPDISCOVERY on your network by clicking on number in column “Non inventoried” in the network list.



If there is, in the list, devices you know as legitimate, you can register them so they will not be displayed next time. For this, just click the icon at the end of corresponding line. Before, you may want to register "Device type" to easily identify known hosts (see §5.9.3.8 Registering known hosts.).

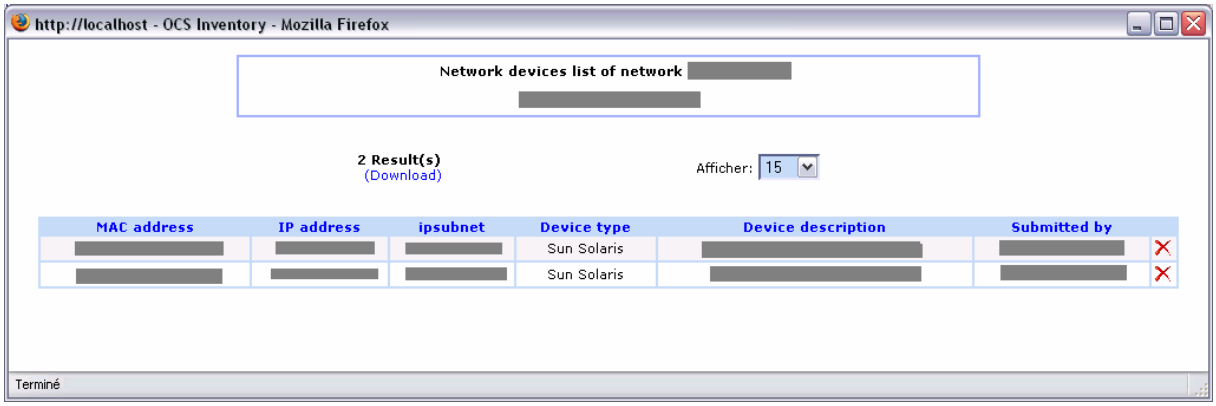
5.9.3.5 Show IPDISCOVER enabled hosts.

You can view the list of hosts running IPDISCOVERY feature on your network by clicking on number in column "IpDiscover" in the network list.



5.9.3.6 Show known or identified hosts.

You can view the list of known hosts already identified by someone on your network by clicking on number in column “Identified” in the network list.

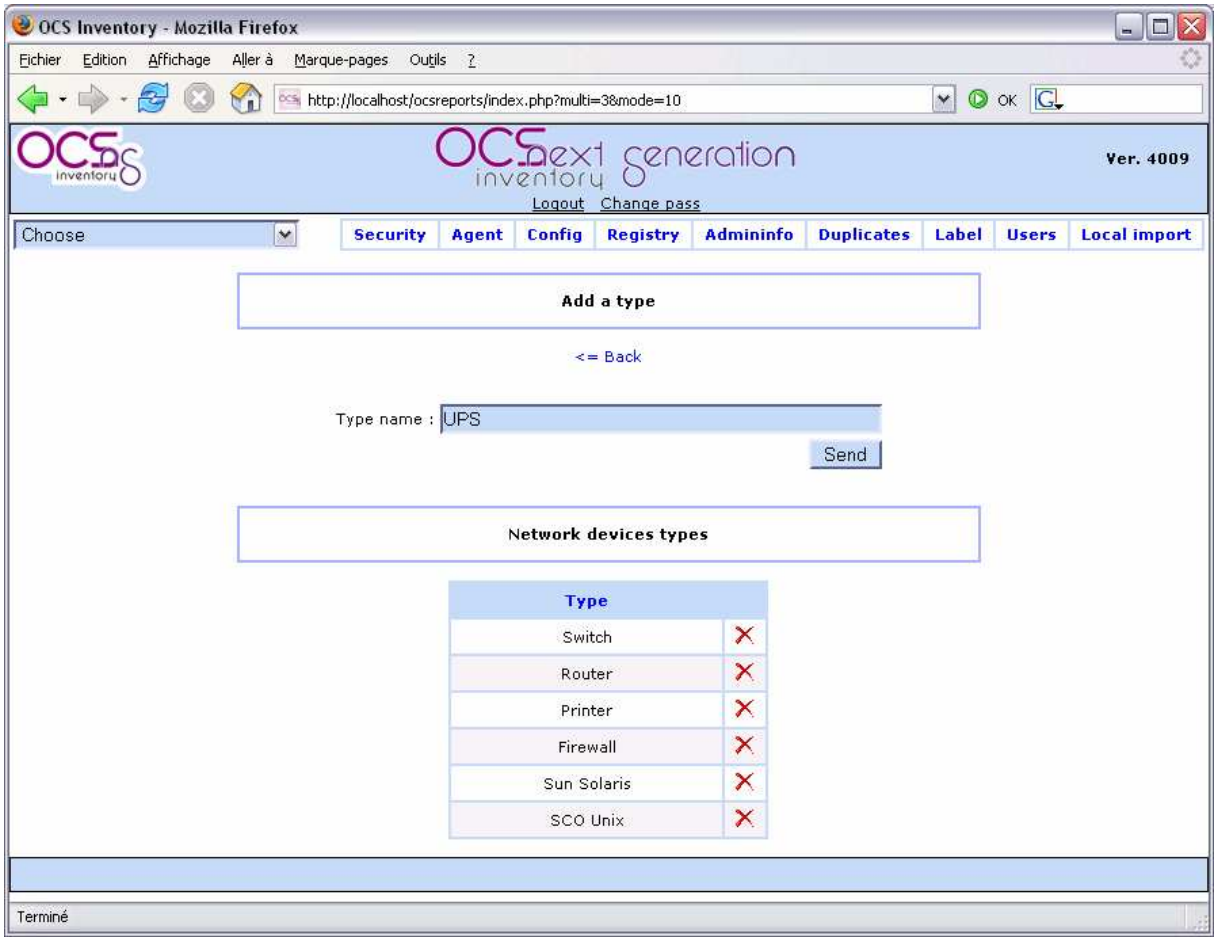


5.9.3.7 Managing known device types.

You can register devices (such as routers, switches, network printers, computers for which there is no inventory agent…) as you know they are legitimate. As is, they will not be displayed in the list of uninventoried devices, to allow you concentrate on suspicious devices.

You may first define some device types to identify them easily.

Click on “Config” menu to manage your device types.

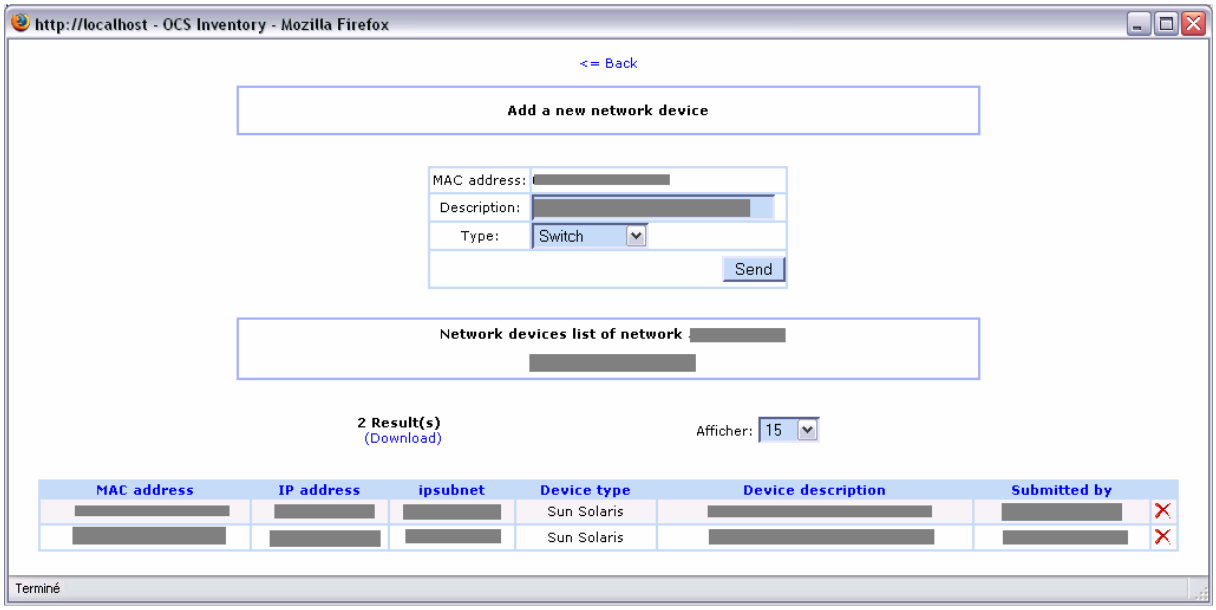


You can add new device type by entering the “Type name” you want and clicking “Send” button.

You can remove any device type by clicking on the red cross at the end of corresponding line.

5.9.3.8 Registering known hosts.

You can add new devices by browsing list of uninventoried devices and clicking the icon at the end of corresponding line. This will bring you to page for adding or removing network devices and “MAC” field will be automatically fill in.



To remove a network device, just click on the red cross at the end of corresponding line.

5.9.4 Enhancing IPDISCOVERY using ipdiscover-util perl script.

IPDISCOVER-UTIL perl script can only be installed on Linux management server. Management server for Windows does not yet support this utility.

This tool enhances features of web administration server to allow querying uninventoried hosts to try to detect operating system and other characteristics.

All features seen in previous chapter 5.9.3 are still available.

5.9.4.1 Installing ipdiscover-util perl script.

IPDISCOVER-UTIL perl script requires the following components.

- ✓ nmap (tested on 3.75)
- ✓ nmblookup (part of the samba suite, tested on 3.0.7/3.0.10)
- ✓ Perl module Net::IP
- ✓ Perl module DBI
- ✓ Perl module DBD::mysql
- ✓ Perl module XML::Simple

If not already done, download “OCSNG_LINUX_SERVER_1.0-XX.tar.gz” from OCS Inventory Web Site (where XX is the latest release, RC2 for example).

Unpack it.

- ✓ tar –xvzf OCSNG_LINUX_SERVER_1.0-XX.tar.gz

Move or copy extracted file “ipdiscover-util.pl” of directory “ipdiscover-util” to the web administration server directory, usually “/var/www/html/ocsreports” and ensure it’s readable by everyone, but writable only by root.

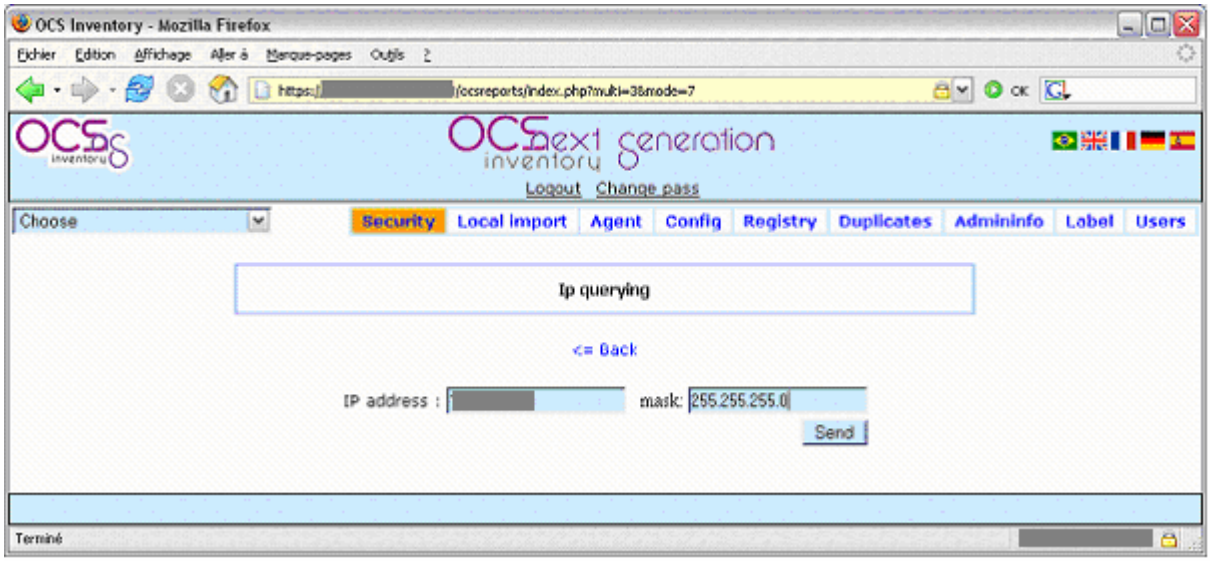
- ✓ cd OCSNG_LINUX_SERVER_1.0-XX/ipdiscover-util
- ✓ chown root:root ipdiscover-util.pl
- ✓ mv ipdiscover-util.pl /var/www/html/ocsreports

Ensure that your Apache web server account is able to write in directory “/var/www/html/ocsreports” (see § 8.3.1 Files and directories permissions under Linux.).

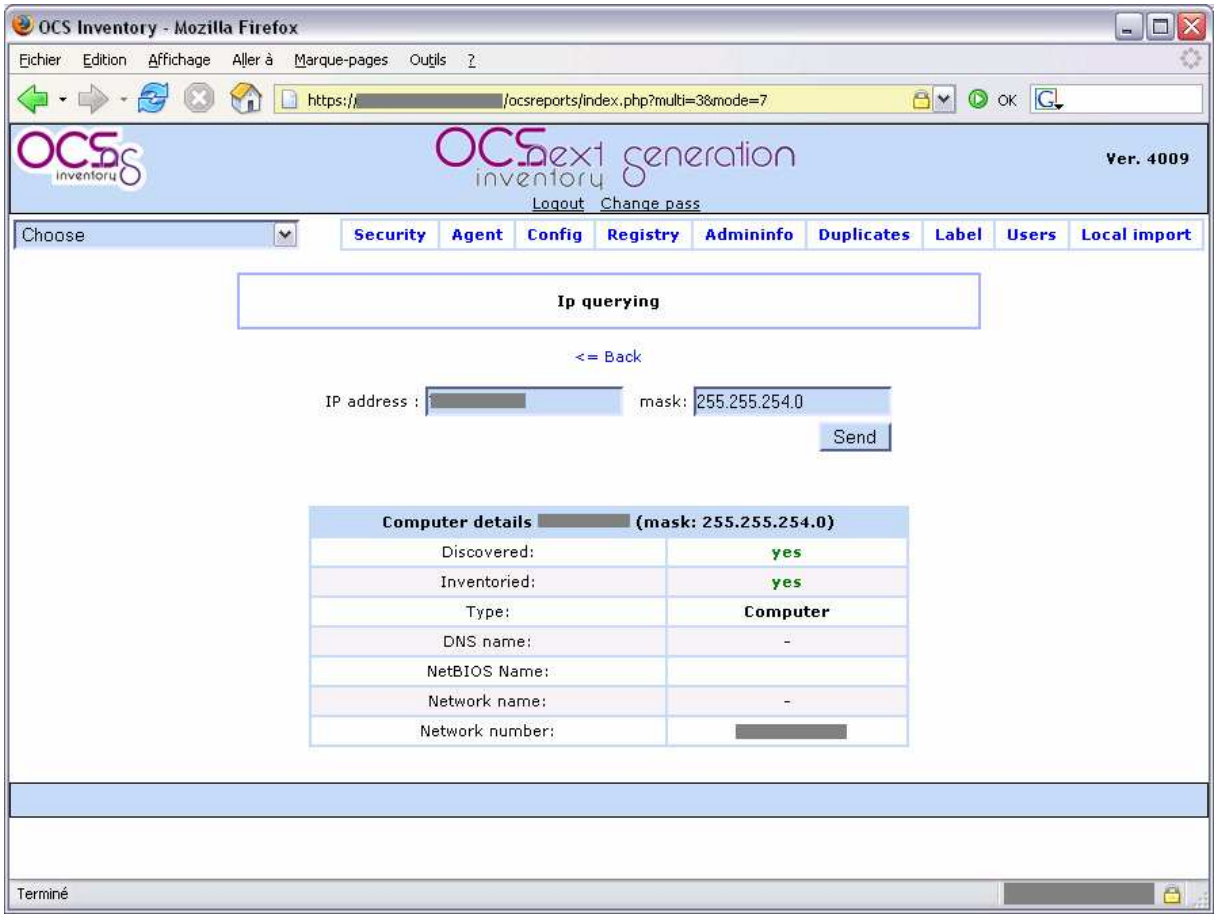
Now, IPDISCOVER-UTIL perl script is usable by Administration server.

5.9.4.2 Scanning an IP address

You can scan query specific IP address to obtain information about the host. Go to “Security” menu and click on “IP querying” menu and then enter IP address, network mask and click “Send” button.

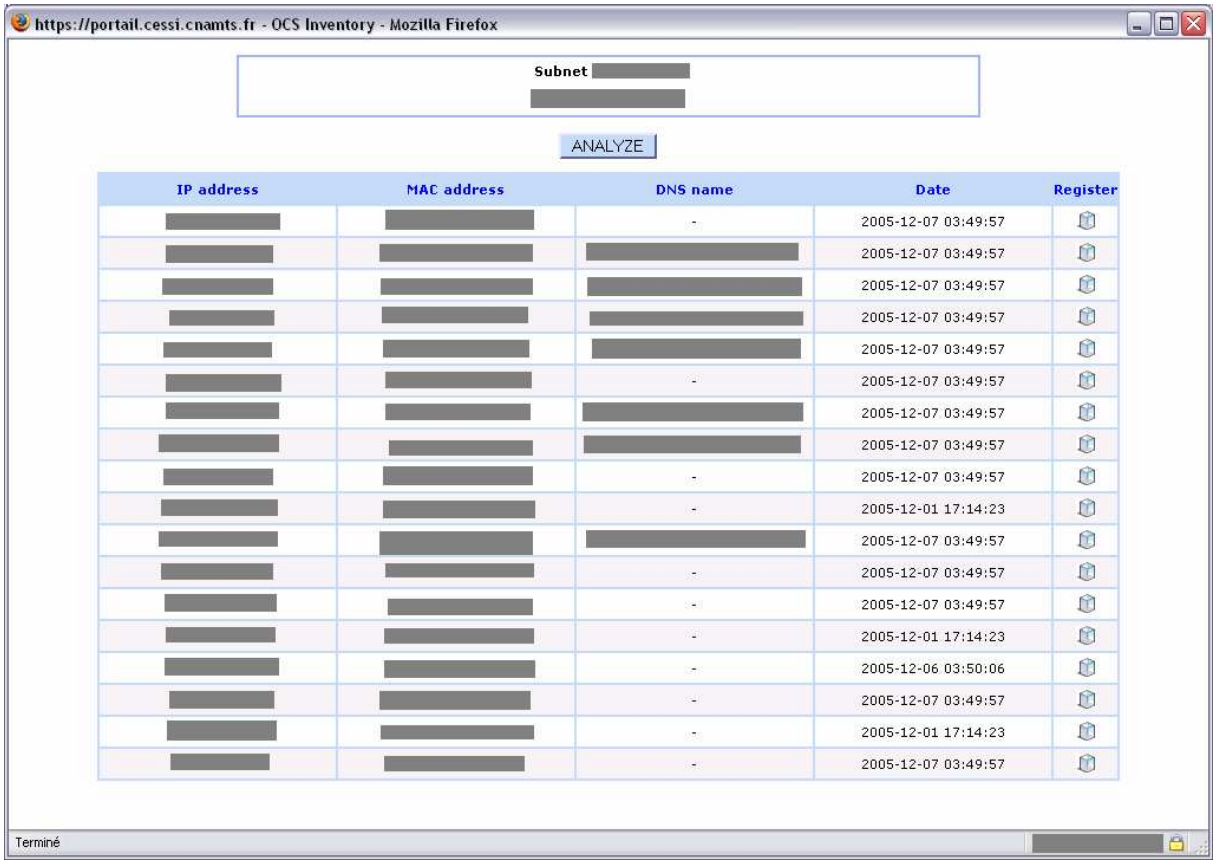


IPDISCOVER-UTIL perl script will use NMAP and NMBLOOKUP utilities to get information about the host (DNS name, NetBios name…) and also show if host is inventoried and/or discovered.



5.9.4.3 Analyzing uninventoried hosts

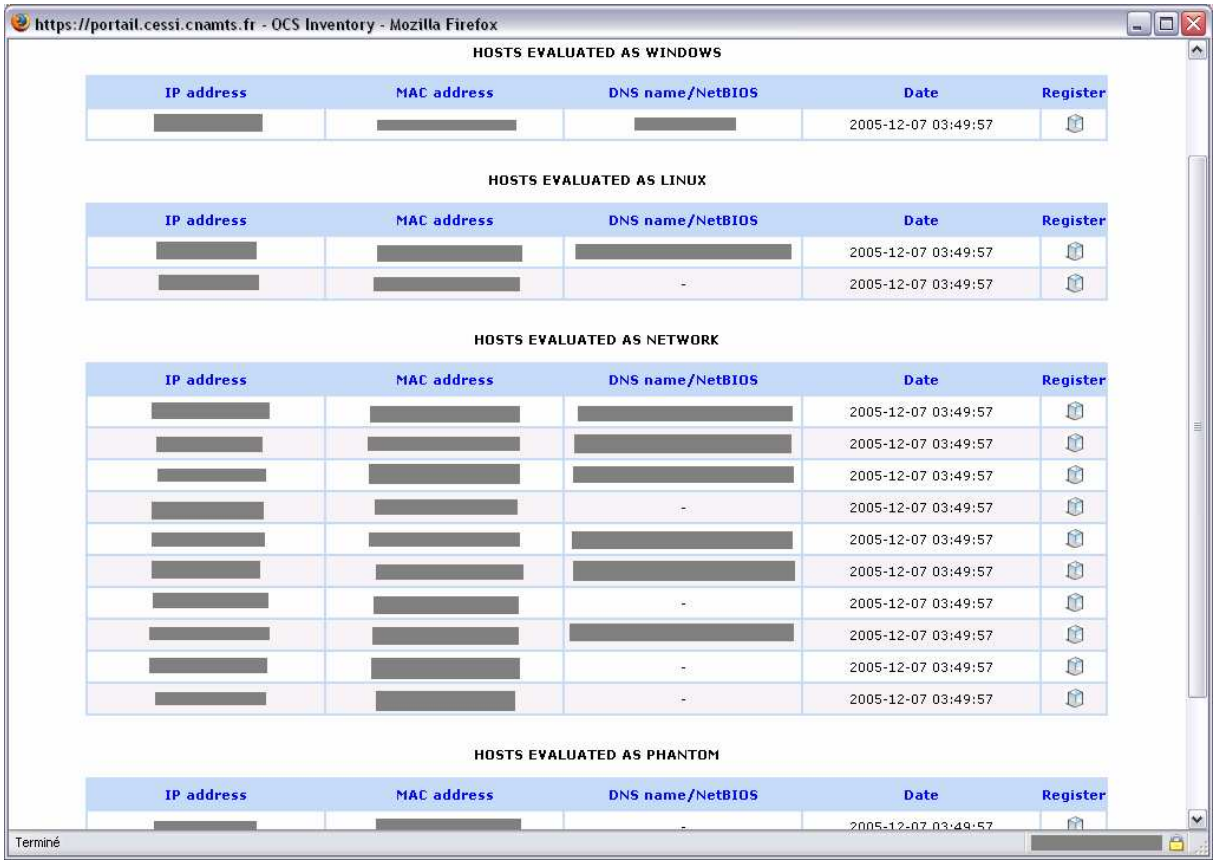
When you show list of uninventoried devices detected by IPDISCOVERY feature, you can now analyze of hosts to grab information about them.



You may also analyze this network by clicking “Analyze” button. IPDISCOVER-UTIL perl script will be used to determine, for each network device, his NetBios name or DNS name and the type of operating system.

The following types are used:

- ✓ **Windows**: host seems to run one version of Microsoft Windows operating system.
- ✓ **Linux**: host seems to run under Linux operating system.
- ✓ **Network**: operating system cannot be determined, so it can be network device such as router, managed switch, printer, or host running Sun Solaris or IBM AIX… Maybe, host is running some firewall software?
- ✓ **Phantom**: host is not responding at this time. Maybe it is powered off or there is a firewall ?



If a network device is legitimate, you can register it by clicking on icon “Register” at the end of corresponding line. You will be able to enter a brief description and to select network device type while registering it (see § 5.9.3.8 Registering known hosts.).

5.10 Using software dictionary.

Software dictionary is used to categorize detected software. This feature is very useful when you use OCS Inventory NG combined with GLPI. As is, you can group software in a category and GLPI will import them with the name of category.

For example, you have many version of Microsoft Office (97, 2000, XP, 2003…), but you don’t care about version. You just want to manage total number of MS Office. You can create a category “Microsoft Office” and insert in this category all version of MS Office. In GLPI, you will only see “Microsoft Office”. Software dictionary acts as a rename utility for GLPI.

Click “Dictionary” toolbar menu.

There are 3 categories by default:

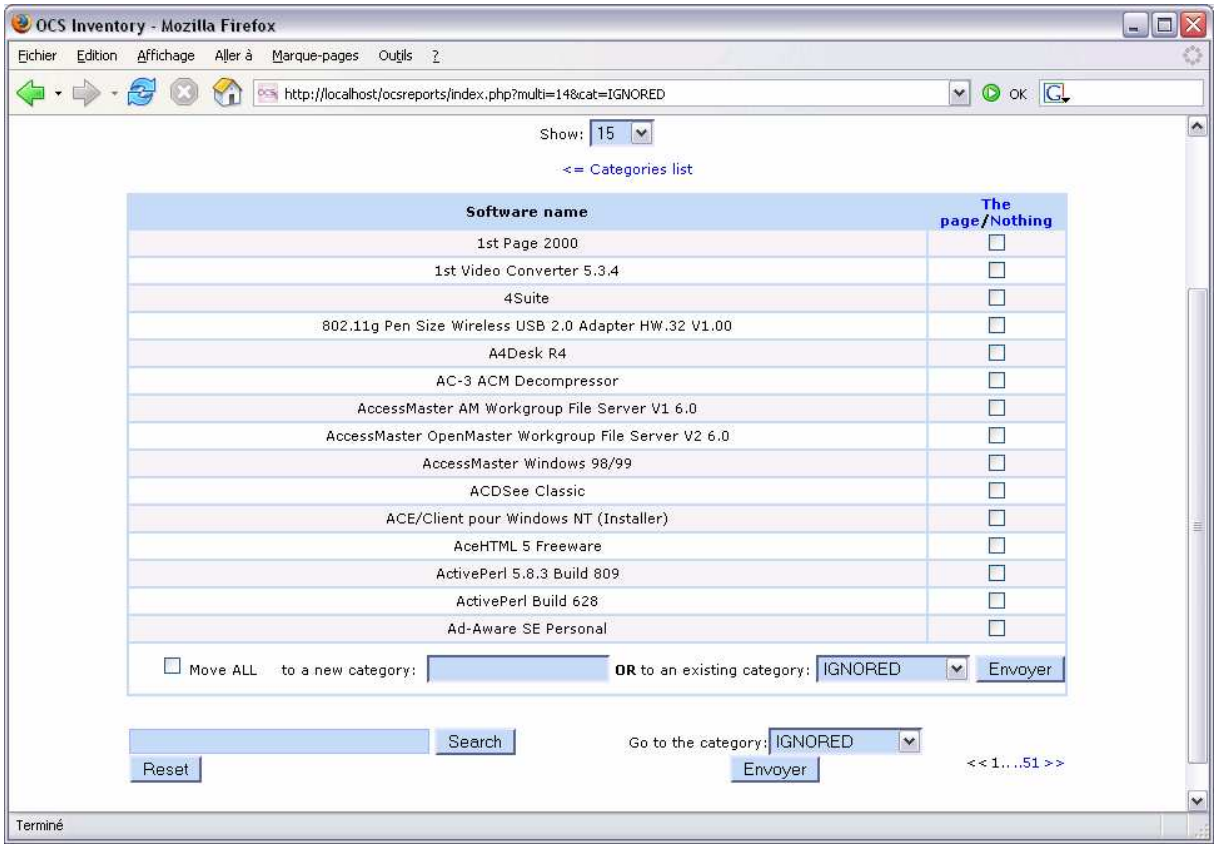
- ✓ NEW: include all new or not yet categorized software.
- ✓ IGNORED: you can put in this category all software you don’t want to import in GLPI.

- ✓ UNCHANGED: you can put in this category all software you don't want to "rename" in GLPI.

You can search software with part of his name by fill in input and clicking "Search software EVERYWHERE" button.

If you manage many categories, you can search a category by fill in part of his name in input and clicking "Search category" button.

Click on a category name to display software included.



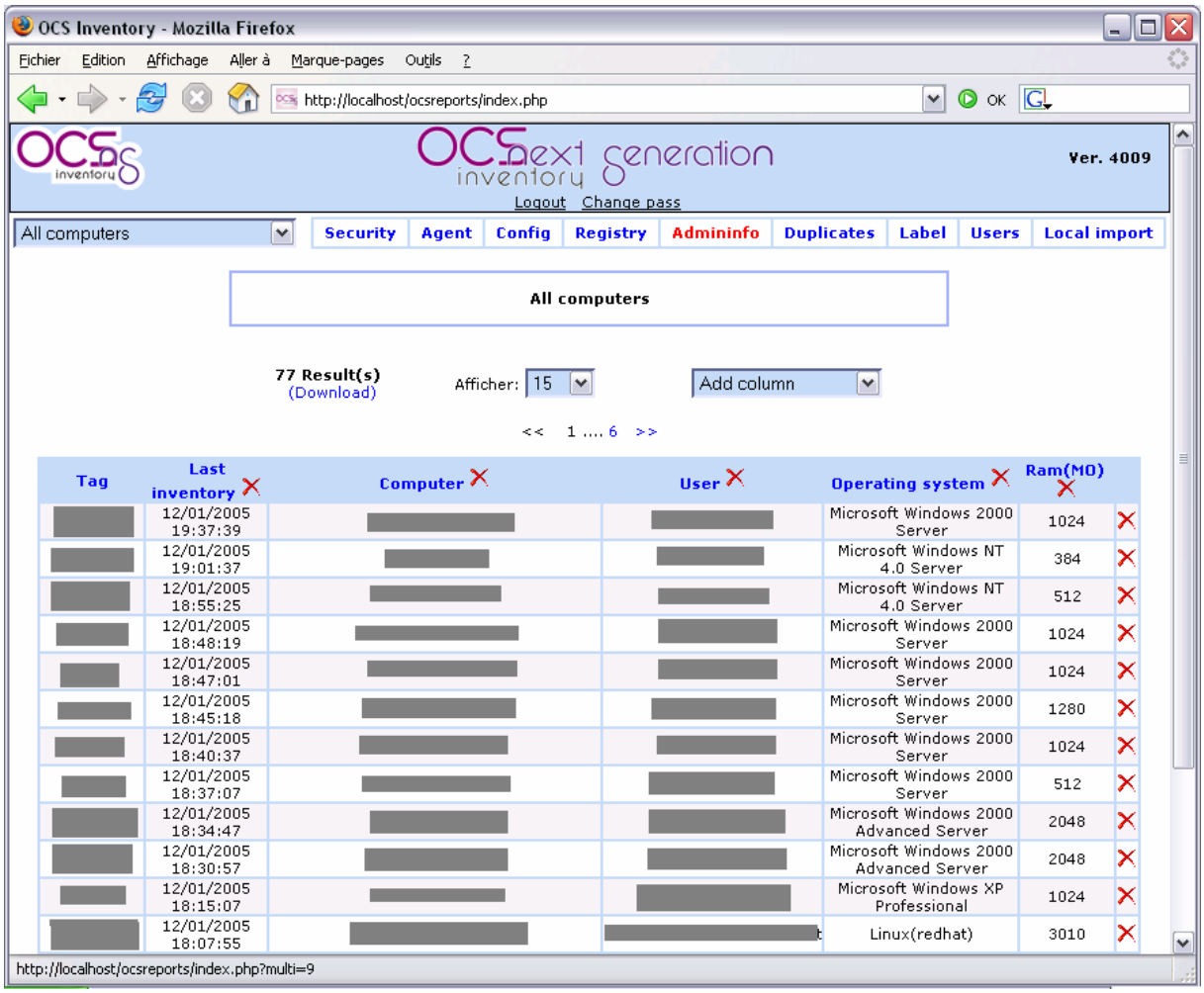
You can select software to move to new category (you must fill in the new category name) or to an existing category (select it in the dropdown).

If you check “Move all”, all software, even those not displayed, will be moved to the desired category, not only the selected ones.

You can select all displayed software by clicking “The page” and deselect all displayed software by clicking “Nothing”.

6 Querying inventory results.

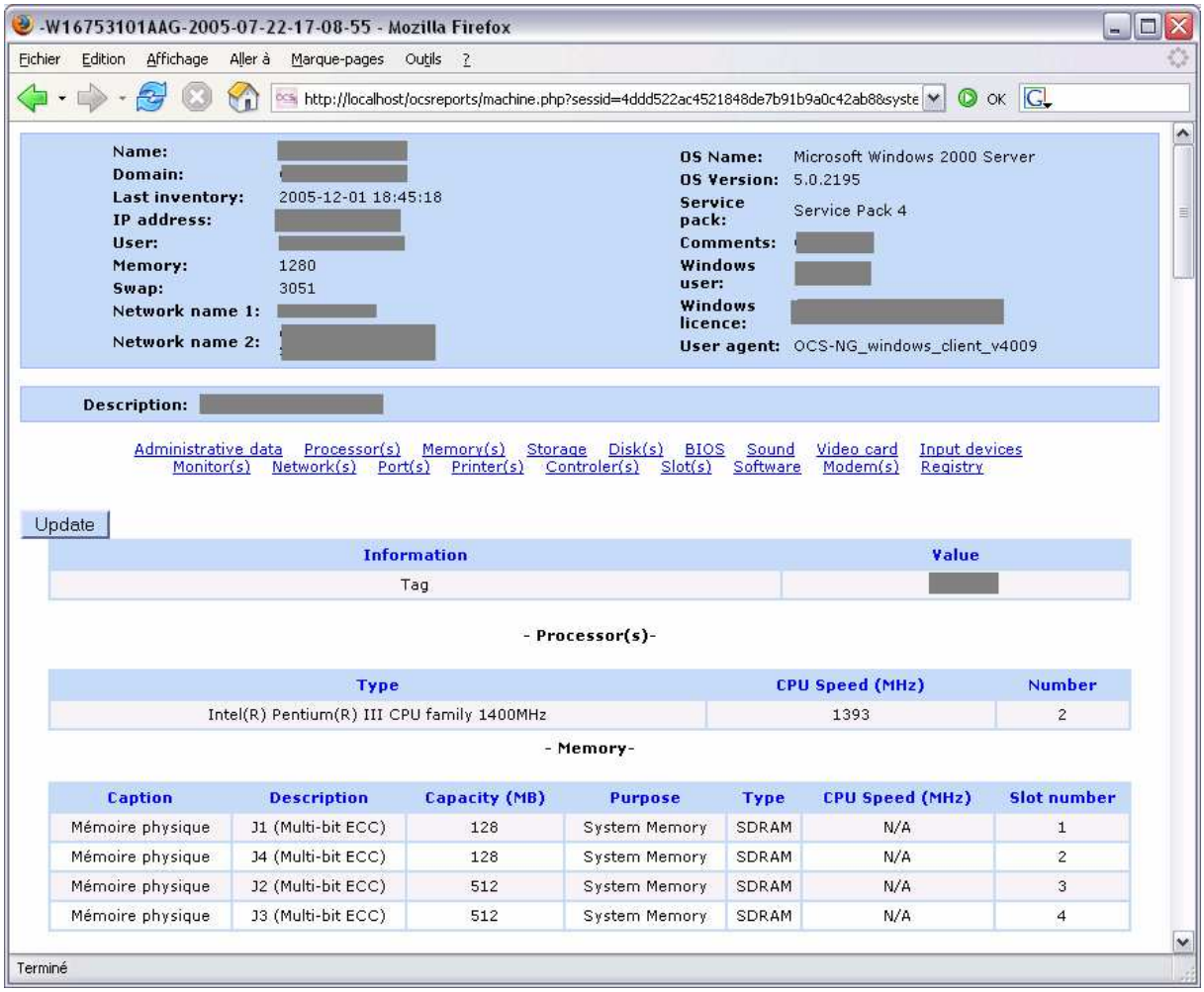
Point your browser to the URL "http://administration_server/ocsreports" and login in.



You must use top left combo-box to run predefined queries.

6.1 All computers.

This query will allow you to display all inventoried computers. Just click on a computer name to open his properties in a new browser window.



- ✓ Top banner - Display the general information for the current device
- ✓ Links section – Just click on the appropriate link to display the corresponding information.
- ✓ Bottom section – Use “show everything” to display all sections. To print the currently displayed information, use “print this page”.
- ✓ Special section Administrative data – Use this section to display the administrative information of the device. This page fits with your settings in “admininfo” tab. Use the “update” button to change values.

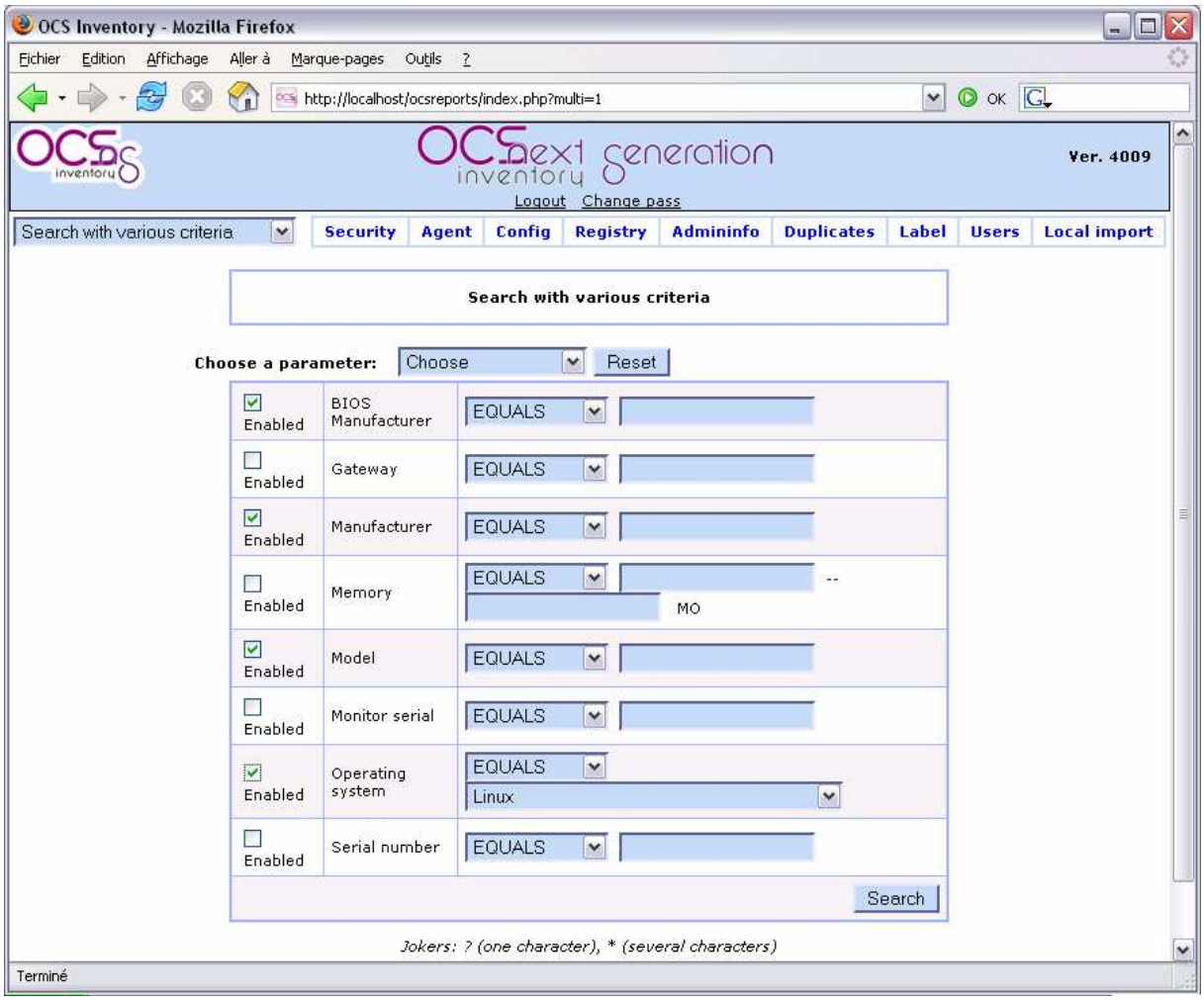
6.2 TAG / number of PC repartition.

This query allow you to display all machine grouped by TAG account info. Click on the computers count to retrieve the corresponding devices.

For example, if you’ve choose to set your TAG information to reflect your geographical sites, this will display the number of computer in each different site.

6.3 Search with various criteria.

This query allows you to search for computers having specific feature.



You can add new parameter to the search by dropping down the combo-box and selecting him in the list.

Default search parameters are:

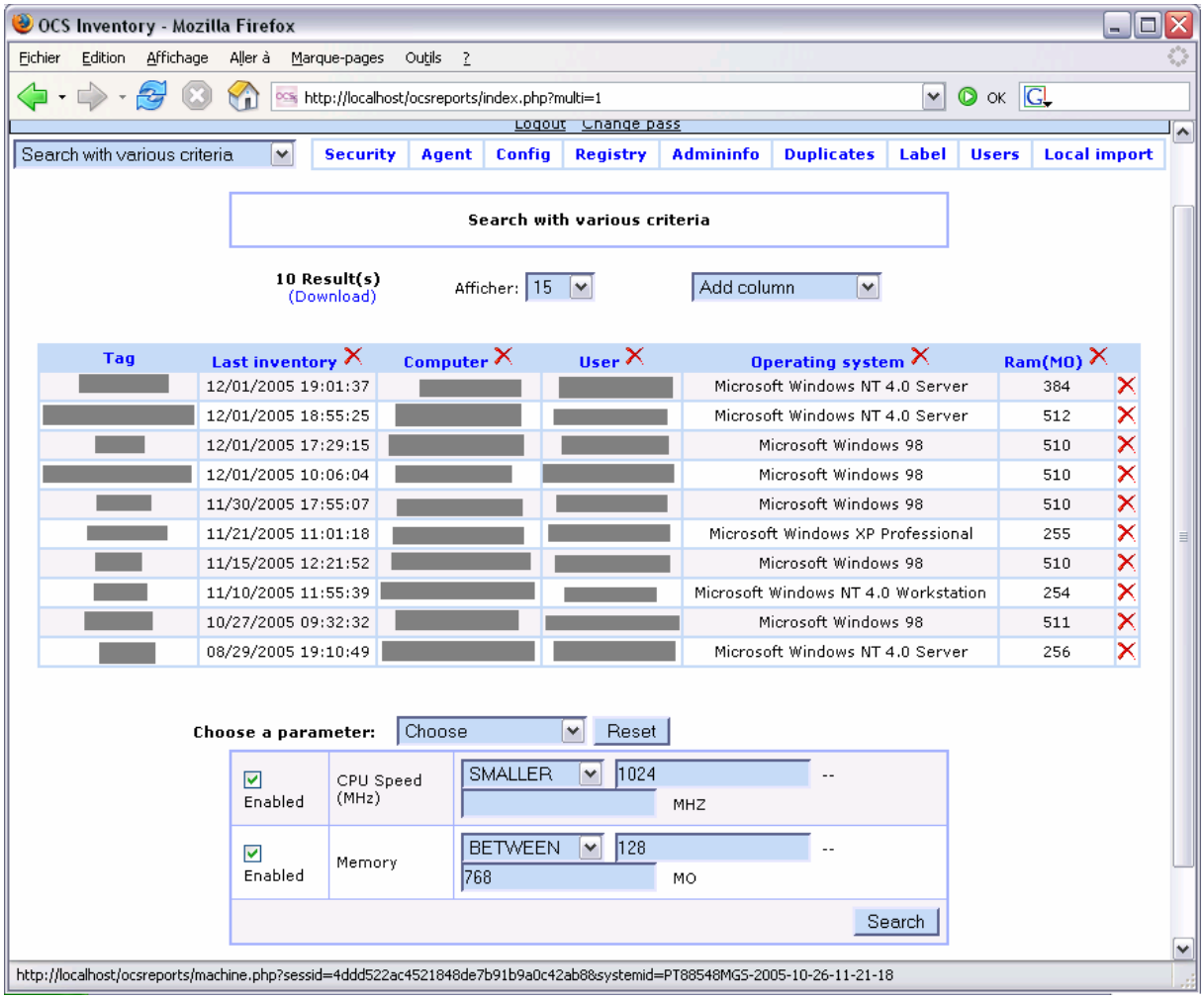
- ✓ BIOS Manufacturer
- ✓ CPU Speed
- ✓ Computer name
- ✓ Domain
- ✓ Gateway
- ✓ IP Address
- ✓ Last inventory
- ✓ Memory
- ✓ Model
- ✓ Monitor serial

- ✓ Network number
- ✓ Operating system
- ✓ Registry key value
- ✓ Serial number
- ✓ Software (1)
- ✓ Software (2)
- ✓ Tag value
- ✓ User logged in
- ✓ User agent (show OCS NG agent version)
- ✓ And all the administrative information you've defined.

For each parameter, you can use one of the following comparison operators, depending of the parameter you've selected:

- ✓ EQUAL
- ✓ DIFFERENT
- ✓ SMALLER
- ✓ BIGGER
- ✓ BETWEEN
- ✓ OUT OF

NB: Don't forget to enable the parameter in the search!


OCS Inventory - Mozilla Firefox
Fichier Edition Affichage Aller à Marque-pages Outils ?
http://localhost/ocsreports/index.php?multi=1
OK
Logout Change pass
Search with various criteria
Security Agent Config Registry Admininfo Duplicates Label Users Local import
Search with various criteria
10 Result(s)
(Download)
Afficher: 15
Add column
Tag Last inventory Computer User Operating system Ram(MO)
12/01/2005 19:01:37 Microsoft Windows NT 4.0 Server 384
12/01/2005 18:55:25 Microsoft Windows NT 4.0 Server 512
12/01/2005 17:29:15 Microsoft Windows 98 510
12/01/2005 10:06:04 Microsoft Windows 98 510
11/30/2005 17:55:07 Microsoft Windows 98 510
11/21/2005 11:01:18 Microsoft Windows XP Professional 255
11/15/2005 12:21:52 Microsoft Windows 98 510
11/10/2005 11:55:39 Microsoft Windows NT 4.0 Workstation 254
10/27/2005 09:32:32 Microsoft Windows 98 511
08/29/2005 19:10:49 Microsoft Windows NT 4.0 Server 256
Choose a parameter: Choose Reset
Enabled CPU Speed (MHz) SMALLER 1024 -- MHZ
Enabled Memory BETWEEN 128 -- 768 MO
Search
http://localhost/ocsreports/machine.php?sessid=4ddd522ac4521848de7b91b9a0c42ab88systemid=PT88548MGS-2005-10-26-11-21-18

7 Management server tuning.

OCS Inventory NG management server needs some tuning to support the load of a large number of inventoried computers. Performances are just limited by the hardware configuration (especially the amount of RAM, processor is not very loaded) of computer hosting the 3 main components:

- ✓ MySQL database server.
- ✓ Communication server.
- ✓ Administration server.

For example, our production server manages more than 70 000 clients. For this, we have 2 servers running Linux Debian, one for the database server and the Communication server, and another one for Administration server and a replica of database server. Hardware configuration for both servers is the following:

- ✓ 1 Intel Pentium 4 2,8 GHz.
- ✓ 3 GB RAM

Because of the amount of available RAM, we have to limit the number of simultaneous HTTP connection to Communication and Administration server to 400.

You must keep an eye on Apache web server logs for Communication server to detect any problems. Also, check Communication server log file in directory "/var/log/ocsinventory-NG".

If you want to limit the number of simultaneous connections, you must update the "MaxClients" directive in Apache configuration file, usually "/etc/httpd/conf/httppd.conf".

Also, MySQL database server is limited by default to 100 simultaneous connections. So, if the Communication server handles more than 100 simultaneous requests for inventory, it will not be able to answer all. You can upgrade this value by updating the "max_connections" MySQL variable for mysqld daemon.

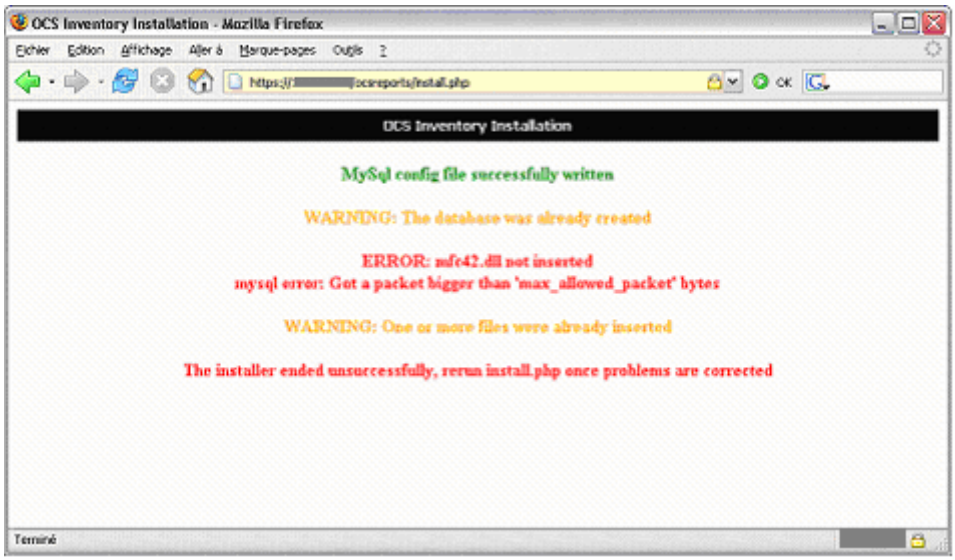
8 Common errors

Check FAQ on OCS Inventory web site for updates.

8.1 MySQL errors.

8.1.1 Max_allowed_packet error

If you encounter an error message with "max_allowed_packet" MySQL error, you must update your MySQL configuration to increase the maximum size of packet accepted by MySQL. We recommend setting the value to 4 MB.



Open the file "my.cnf" (usually available in "/etc" directory under Linux, in "C:\OCSinventoryNG\xampp\mysql\bin" under Windows) and add the line "max_allowed_packet=4M" in "[mysqld]" section.

```
[mysqld]
datadir=/var/lib/mysql
socket=/var/lib/mysql/mysql.sock
max_allowed_packet=4M

[mysql.server]
user=mysql
basedir=/var/lib

[safe_mysqld]
err-log=/var/log/mysqld.log
pid-file=/var/run/mysqld/mysqld.pid
```

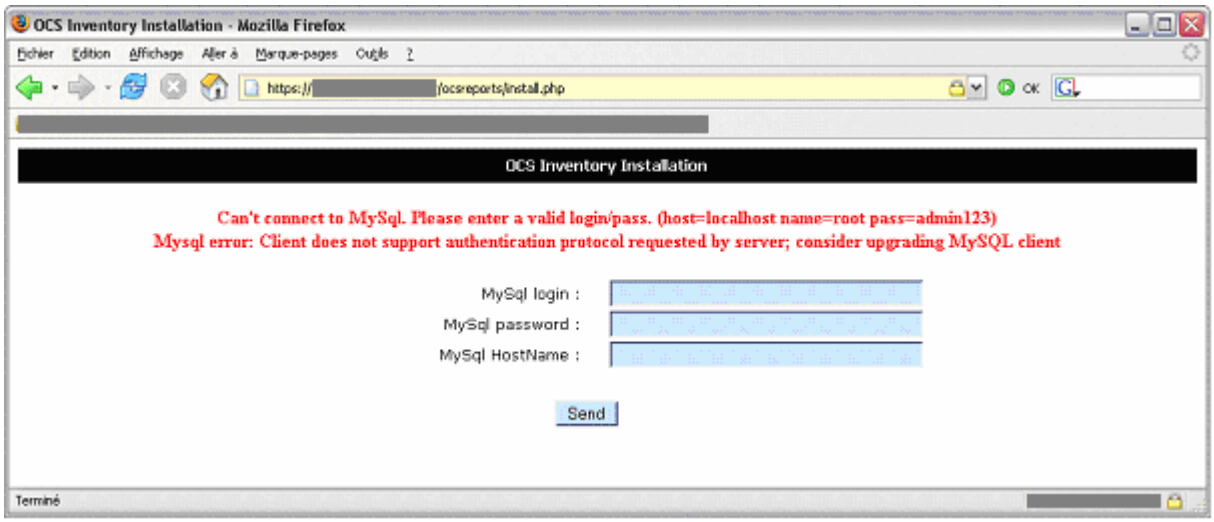
Figure 9 : Sample my.cnf MySQL configuration file.

Then, restart MySQL server.

- ✓ /etc/rc.d/init.d/mysql restart

8.1.2 Client does not support authentication protocol.

If you encounter an error message with "Client does not support authentication protocol requested by server; consider upgrading MySQL client" MySQL error, you must enable support for old password storage method in your MySQL configuration.



There is 2 way to do this.

1. Add directive "old-passwords" to the file "my.cnf" (usually in directory "/etc" under Linux and in "C:\OCSinventoryNG\xampp\mysql\bin" under Windows), in the section corresponding to your MySQL server.

```
# The MySQL server
[mysqld]
old-passwords
port        = 3306
socket      = mysql
```

Figure 10 : Sample my.cnf MySQL configuration file.

2. Add switch "--old-password" to the command line launching MySQL server.

Then, restart MySQL server.

- ✓ /etc/rc.d/init.d/mysql restart

Next, you may have to update 'root' password with the following commands:

- Connect to MySQL database "mysql –u root –p mysql" as root to update his password.
- Then, run the update statement "update user set password=OLD_PASSWORD('root_password') where user='root';"
- Once terminated, exit mysql command interpreter by entering "exit" command.

```
[root@linux root]# mysql -u root -p mysql
Enter password:
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 19 to server version: 4.1.7-standard

Type 'help;' or '\h' for help. Type '\c' to clear the buffer.

mysql> update user set password=OLD_PASSWORD('admin123') where user='root';
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> exit
Bye
[root@linux root]#
```

Figure 11 : Sample MySQL root password update.

8.2 PHP errors

8.2.1 Requested content-length

If you see in apache error log (file error_log or ssl_error.log) **message like following**:

[Mon Sep 05 18:30:03 2005] [error] [client XXX.XXX.XXX.XXX] Requested content-length of 831148 is larger than the configured limit of 524288, referer: http://administration_server/ocsreports/?multi=8

That's because Apache directive "LimitRequestBody" is used to limit size of HTTP requests.

To fix this, open Apache configuration file "httpd.conf", usually in directory "/etc/httpd/conf" (under some distributions, Apache configuration for PHP may also resides in include directory, usually "/etc/httpd/conf.d").

Find the directive “LimitRequestBody” and ensure that the size is at least 4 MB (4194304 bytes) and not the default 512 KB (524288 bytes).

```
#
# PHP is an HTML-embedded scripting language which attempts to make it
# easy for developers to write dynamically generated webpages.
#

LoadModule php4_module modules/libphp4.so

#
# Cause the PHP interpreter handle files with a .php extension.
#
<Files *.php>
   SetOutputFilter PHP
   SetInputFilter PHP
   LimitRequestBody 4194304
</Files>
```

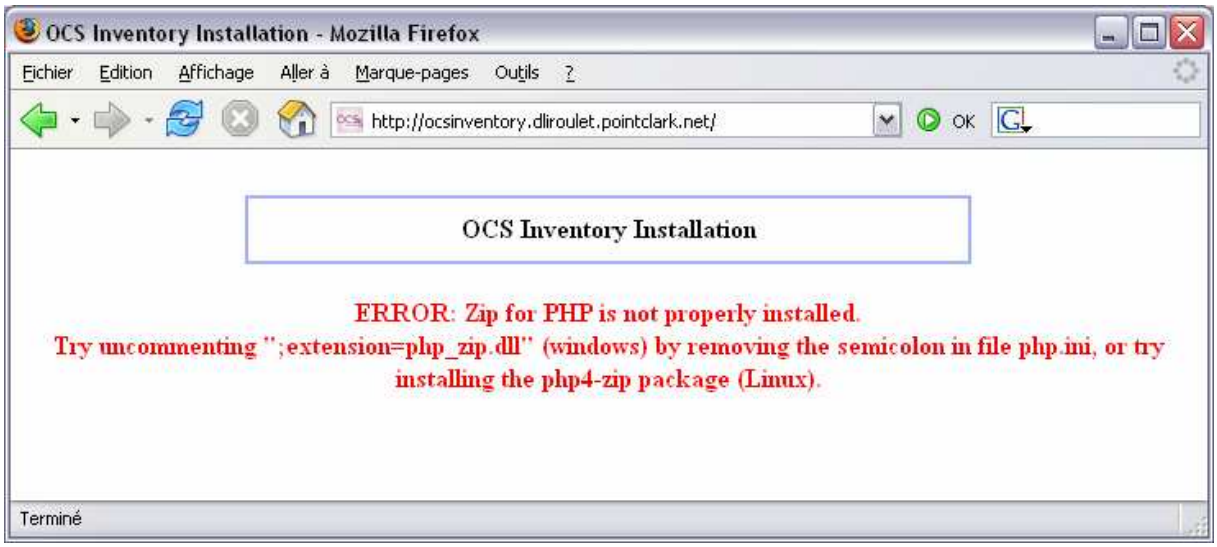
Figure 12 : Sample Apache configuration for PHP.

Update this value if needed and restart Apache daemon.

- ✓ /etc/rc.d/init.d/httpd restart

8.2.2 ZIP support

When you point your browser to Administration Server URL “http://administration_server/ocsreports”, you may encounter an error telling that ZIP for PHP is not installed.



Uploading a new release of Agent for Windows for automatic deployment needs PHP having ZIP support enabled.

With OCS Inventory NG Server for Windows, you just have to open file "php.ini", located in "C:\Windows" or "C:\WINNT" directory, with text editor and uncomment (i.e. remove semicolon) line "extension=php_zip.dll". Then restart Apache2 service.

With OCS Inventory NG Server for Linux, ensure you have file "php_zip.so" or "zip.so" in your PHP extension directory, generally located in "/usr/lib/php" or "/usr/lib/php4" directory.

Then check "php.ini" file located in "/etc" directory and uncomment (i.e. remove semicolon) line "extension=php_zip.so" or "extension=zip.so". To finish, restart Apache daemon.

- ✓ /etc/rc.d/init.d/httpd restart

If you cannot find one of these extension, you must donwload and install your own. You can search for precompiled package for your distrubution:

- Debian package users: http://www.debian.org/distrib/packages#search_packages
- RPM package users: http://rpm.pbone.net/

Or you can build your own (you may also have to setup "zziplib" and "zziplib-devel" packages).

1. Find your version of PHP: "rpm -q php" or "dpkg -l *php*"
2. Download PHP sources corresponding to your version from http://www.php.net/releases.php, exemple php-4.3.11.tar.gz.
3. Unpack it: "tar -xvzf php-4.3.11.tar.gz"
4. Go to extracted directory: "cd php-4.3.11"
5. Configure php to use zip as shared extension: "./configure --with-zip=shared"
6. Build php and zip extension: "make"
7. Copy zip extension to your php extension directory: "cp modules/zip.so /usr/lib/php4"
8. Edit /etc/php.ini file and add line "extension=zip.so"
9. Restart apache server: "/etc/rc.d/init.d/httpd restart"

```
;;;;;;;;;;;;;;;;;;;;
; Dynamic Extensions ;
;;;;;;;;;;;;;;;;;;;;
;
; If you wish to have an extension loaded automatically, use the following
; syntax:
;; extension=modulename.extension
;
; For example:
; extension=msql.so
;
; Note that it should be the name of the module only; no directory information
```

```
; needs to go here. Specify the location of the extension with the
; extension_dir directive above.
extension=zip.so
```

Figure 13: Sample PHP.INI file.

8.3 Apache web server

8.3.1 Files and directories permissions under Linux.

We assume that Apache web server is running under account "apache" and group "apache", and that you've setup OCS Inventory NG management server as described previously:

- ✓ Administration server files are in directory "/var/www/html/ocsreports"
- ✓ Communication server files are in directory "/usr/local/ocsinventory-NG"
- ✓ Log for Communication server are in directory "/var/log/ocsinventory-NG"

Directory	File	Owner	Group	Permissions
/var/www/html/ocsreports		root	apache	-rwxrwxr-x
	dbconfig.inc.php	apache	apache	-rw-rw-r--
	All others	root	root	-rw-r--r--
/var/www/html/ocsreports/css		root	root	-rwxr-xr-x
	All files	root	root	-rw-r--r--
/var/www/html/ocsreports/files		root	root	-rwxr-xr-x
	All files	root	root	-rw-r--r--
/var/www/html/ocsreports/image		root	root	-rwxr-xr-x
	All files	root	root	-rw-r--r--
/var/www/html/ocsreports/languages		root	root	-rwxr-xr-x
	All files	root	root	-rw-r--r--
/usr/local/ocsinventory-NG		root	root	-rwxr-xr-x
	Ocsinventory_local.pl	root	root	-rwxr--r--
	All files	root	root	-rw-r--r--
/var/log/ocsinventory-NG		apache	apache	-rwxrwx-r-x
	All files	apache	apache	-rw-rw-r--

If you're using IPDISCOVER-UTIL perl script through the Administration server, it will automatically create one directory "ipd" under directory "/var/www/html/ocsreports", which are owned by user "apache" with group "apache". If you encounter any problems, remove this directory, check permissions of "/var/www/html/ocsreports" directory and re-run utility through web administration server.