

Cómo Instalar CentOS Directory Server en CentOS 5

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1 Introducción a CentOS Directory Server

1. Es un servidor de directorios basado en RedHat Directory Server, a la manera de un fork, tal como la distro RedHat Enterprise Linux y Fedora.
2. El sistema base está licenciado bajo GPLv2, y RedHat (quien posee el copy right) incluye una excepción para poder linkearlo con software no GPL.

2 Principales características de CentOS Directory Server

1. Soporta LDAPv3.
2. Documentación extensa, ya que utiliza la de RedHat Directory Server, la cual puede ser accedida desde internet sin necesidad de tener una licencia de RedHat.
3. Soporta autenticación segura con SSLv3, TLSv1 y SASL.
4. Implementa características avanzadas de replicación, es decir, Multimaster Replication, o Replicación Multi Maestro.
5. Puede sincronizar usuarios y grupos con Active Directory (vamos, a mi no me agrada mucho andar sincronizando cosas con productos de la Microsoft, pero es una característica y hay que mencionarla).
6. Posee una interfaz gráfica de administración muy completa en donde centraliza todo lo relacionado al manejo de los servicios, usuarios, grupos, logs y es posible realizar respaldos , entre otras cosas.

3 Aplicaciones del Servicio de Directorio

Las aplicaciones o utilidades de un servicio de directorio son variadas, y a continuación se muestra una lista de algunas de ellas:

1. Principalmente se utiliza para propósitos de autenticación, por lo cual cualquier aplicación que lo necesite, y posea soporte para LDAP, podrá autenticarse y obtener la información que necesita del servidor de directorios, tal como dirección de correo electrónico, teléfono, dirección, etc.
2. Existen diferentes servicios que soportan LDAP, por ejemplo el proxy Squid, servidor smtp Postfix, y se utiliza para implementar "ldap naming".
3. El cliente de correo Thunderbird (al igual que otros, como Evolution) posee soporte para LDAP, por lo cual puedes conectarte a un servidor de este tipo y obtener tu libreta de direcciones de correo.
4. En sistemas Linux/Unix es posible autenticar usuarios del sistema operativo contra un servidor LDAP, vía PAM y libuser, en vez de la autenticación por defecto (/etc/passwd, /etc/shadow, /etc/group). Esto provee de autenticación centralizada, lo que facilita enormemente la administración de las cuentas para sistemas de terminales livianas, o de acceso compartido.

4 Pasos previos a la instalación

4.1 Comprobando el hostname

Para que no haya problemas con la instalación, es necesario que el hostname del nodo en el cual estamos instalando CDS corresponda al FQDN del mismo (fully qualified domain name, el nombre completo):

```
[morenisco@dirserver1 ~]$ hostname
```

dirserver1.cdsl.cl

4.2 Comprobando la versión del sistema operativo

Esta documentación fue realizada para CentOS 5.2:

```
[morenisco@dirserver1 ~]$ cat /etc/issue
CentOS release 5.2 (Final)
Kernel \r on an \m
```

4.3 Obteniendo el archivo del repositorio de testing de CentOS

```
[root@dirserver1 ~]# cd /etc/yum.repos.d/
[root@dirserver1 yum.repos.d]# ls -l
total 16
-rw-r--r-- 1 root root 2049 Jun 19 2008 CentOS-Base.repo
-rw-r--r-- 1 root root 626 Jun 19 2008 CentOS-Media.repo
[root@dirserver1 yum.repos.d]#
[root@dirserver1 yum.repos.d]# wget -v http://dev.centos.org/centos/5/CentOS-Testing.repo
--09:21:16-- http://dev.centos.org/centos/5/CentOS-Testing.repo
Resolving dev.centos.org... 204.15.73.242
Connecting to dev.centos.org[204.15.73.242]:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 710 [text/plain]
Saving to: `CentOS-Testing.repo'

100%
[=====>]
710      --.-K/s  in 0s

09:21:17 (60.0 MB/s) - `CentOS-Testing.repo' saved [710/710]
[root@dirserver1 yum.repos.d]#
```

4.4 Excluyendo una versión específica de java del repositorio de testing

En el archivo que describe el repositorio es necesario agregar la línea `exclude=java-1.7.0-icedtea`, con el fin de excluir este paquete para ser instalado.

```
[root@dirserver1 ~]# cd /etc/yum.repos.d/
[root@dirserver1 yum.repos.d]# ls -l
total 24
-rw-r--r-- 1 root root 2049 Jun 19 2008 CentOS-Base.repo
```

```

-rw-r--r-- 1 root root 626 Jun 19 2008 CentOS-Media.repo
-rw-r--r-- 1 root root 710 Apr 17 2007 CentOS-Testing.repo
[root@dirserver1 yum.repos.d]#
[root@dirserver1 yum.repos.d]# vim CentOS-Testing.repo
[c5-testing]
name=CentOS-5 Testing
baseurl=http://dev.centos.org/centos/$releasever/testing/$basearch/
enabled=0
gpgcheck=1
gpgkey=http://dev.centos.org/centos/RPM-GPG-KEY-CentOS-testing
# Added by hand
exclude=java-1.7.0-icedtea
# CentOS-Testing:
# !!!! CAUTION !!!!
# This repository is a proving grounds for packages on their way to CentOSPlus and CentOS Extras.
# They may or may not replace core CentOS packages, and are not guaranteed to function properly.
# These packages build and install, but are waiting for feedback from testers as to
# functionality and stability. Packages in this repository will come and go during the
# development period, so it should not be left enabled or used on production systems without due
# consideration.

```

5 Instalando algunas dependencias necesarias.

```

[root@dirserver1 ~]# yum install xorg-x11-xauth bitstream-vera-fonts dejavu-lgc-fonts urw-fonts
Setting up Install Process
Parsing package install arguments
Package xorg-x11-xauth - 1:1.0.1-2.1.i386 is already installed.
Package bitstream-vera-fonts - 1.10-7.noarch is already installed.
Package dejavu-lgc-fonts - 2.10-1.noarch is already installed.
Resolving Dependencies
--> Running transaction check
---> Package urw-fonts.noarch 0:2.3-6.1.1 set to be updated
--> Finished Dependency Resolution

```

Dependencies Resolved

```

=====
Package          Arch    Version      Repository    Size
=====
Installing:

```

urw-fonts noarch 2.3-6.1.1 base 4.5 M

Transaction Summary

=====

Install 1 Package(s)
Update 0 Package(s)
Remove 0 Package(s)

Total download size: 4.5 M

Is this ok [y/N]: y

Downloading Packages:

(1/1): urw-fonts-2.3-6.1. 100% |=====| 4.5 MB 00:19

Running rpm_check_debug

Running Transaction Test

Finished Transaction Test

Transaction Test Succeeded

Running Transaction

 Installing: urw-fonts ##### [1/1]

Installed: urw-fonts.noarch 0:2.3-6.1.1

Complete!

[root@dirserver1 ~]#

6 Instalación de CentOS Directory Server

Para instalar el meta paquete que contiene la distribución de CentOS Directory Server, es necesario habilitar el repositorio de testing, para que el meta paquete sea obtenido desde ahí.

El comando para realizar ambas operaciones junto a su salida es el siguiente:

```
[root@dirserver1 ~]# yum --enablerepo=c5-testing install centos-ds
c5-testing            100% |=====| 1.9 kB   00:00
primary.sqlite.bz2    100% |=====| 389 kB   00:01
Excluding Packages from CentOS-5 Testing
Finished
Setting up Install Process
Parsing package install arguments
Resolving Dependencies
--> Running transaction check
---> Package centos-ds.i386 0:8.0.0-1.4.el5.centos.4 set to be updated
--> Processing Dependency: centos-admin-console for package: centos-ds
--> Processing Dependency: centos-ds-base for package: centos-ds
--> Processing Dependency: centos-ds-console for package: centos-ds
```

--> Processing Dependency: centos-ds-admin for package: centos-ds
--> Processing Dependency: centos-idm-console for package: centos-ds
--> Processing Dependency: idm-console-framework for package: centos-ds
--> Running transaction check
---> Package centos-idm-console.i386 0:1.0.0-17.el5.centos.4 set to be updated
---> Package centos-ds-console.noarch 0:8.0.0-11.el5.centos.4 set to be updated
---> Package centos-ds-admin.i386 0:8.0.4-3.el5.centos.1 set to be updated
--> Processing Dependency: libldif60.so for package: centos-ds-admin
--> Processing Dependency: libicudata.so.36 for package: centos-ds-admin
--> Processing Dependency: mod_nss for package: centos-ds-admin
--> Processing Dependency: libadminutil.so.1 for package: centos-ds-admin
--> Processing Dependency: perl(Mozilla::LDAP::API) for package: centos-ds-admin
--> Processing Dependency: perl-Mozilla-LDAP for package: centos-ds-admin
--> Processing Dependency: libadmsslutil.so.1 for package: centos-ds-admin
--> Processing Dependency: libldap60.so for package: centos-ds-admin
--> Processing Dependency: perl(Mozilla::LDAP::LDIF) for package: centos-ds-admin
--> Processing Dependency: perl(Mozilla::LDAP::Conn) for package: centos-ds-admin
--> Processing Dependency: perl(Mozilla::LDAP::Utils) for package: centos-ds-admin
--> Processing Dependency: libicuuc.so.36 for package: centos-ds-admin
--> Processing Dependency: libprldap60.so for package: centos-ds-admin
--> Processing Dependency: libicui18n.so.36 for package: centos-ds-admin
--> Processing Dependency: libssldap60.so for package: centos-ds-admin
---> Package centos-ds-base.i386 0:8.0.4-7.el5.centos.0 set to be updated
--> Processing Dependency: libnetsnmphelpers.so.10 for package: centos-ds-base
--> Processing Dependency: cyrus-sasl-gssapi for package: centos-ds-base
--> Processing Dependency: libnetsnmp.so.10 for package: centos-ds-base
--> Processing Dependency: libsvrcore.so.0 for package: centos-ds-base
--> Processing Dependency: libnetsnmpmibs.so.10 for package: centos-ds-base
--> Processing Dependency: mozldap-tools for package: centos-ds-base
--> Processing Dependency: libnetsnmpagent.so.10 for package: centos-ds-base
--> Processing Dependency: cyrus-sasl-md5 for package: centos-ds-base
---> Package idm-console-framework.noarch 0:1.1.1-0.el5.centos.4 set to be updated
--> Processing Dependency: jss >= 4.2 for package: idm-console-framework
--> Processing Dependency: ldapjdk for package: idm-console-framework
---> Package centos-admin-console.noarch 0:8.0.0-11.el5.centos.4 set to be updated
--> Running transaction check
---> Package mod_nss.i386 0:1.0.3-4.el5 set to be updated
--> Processing Dependency: httpd >= 2.0.52 for package: mod_nss
---> Package adminutil.i386 0:1.1.7-3.el5.centos.1 set to be updated
---> Package svrcore.i386 0:4.0.4-3.el5 set to be updated
---> Package mozldap-tools.i386 0:6.0.5-1.el5 set to be updated
---> Package net-snmp-libs.i386 1:5.3.1-24.el5_2.2 set to be updated
---> Package mozldap.i386 0:6.0.5-1.el5 set to be updated
---> Package libicu.i386 0:3.6-5.11.1 set to be updated

```

---> Package ldapjdk.i386 0:4.18-2jpp.3.el5 set to be updated
--> Processing Dependency: jsse for package: ldapjdk
--> Processing Dependency: jndi for package: ldapjdk
--> Processing Dependency: jaas for package: ldapjdk
--> Processing Dependency: java-gcj-compat for package: ldapjdk
--> Processing Dependency: jpackage-utils >= 1.5 for package: ldapjdk
---> Package cyrus-sasl-md5.i386 0:2.1.22-4 set to be updated
---> Package cyrus-sasl-gssapi.i386 0:2.1.22-4 set to be updated
---> Package perl-Mozilla-LDAP.i386 0:1.5.2-4.el5 set to be updated
---> Package jss.i386 0:4.2.4-41.el5.centos.4 set to be updated
--> Running transaction check
---> Package jpackage-utils.noarch 0:1.7.5-1jpp.1.el5.centos set to be updated
---> Package java-1.6.0-openjdk.i386 1:1.6.0.0-0.16.b09.el5.centos set to be updated
--> Processing Dependency: libgif.so.4 for package: java-1.6.0-openjdk
--> Processing Dependency: ca-certificates for package: java-1.6.0-openjdk
--> Processing Dependency: tzdata-java for package: java-1.6.0-openjdk
---> Package httpd.i386 0:2.2.8-1.el5s2.centos set to be updated
--> Processing Dependency: libapr-1.so.0 for package: httpd
--> Processing Dependency: libaprutil-1.so.0 for package: httpd
---> Package java-1.4.2-gcj-compat.i386 0:1.4.2.0-40jpp.115 set to be updated
filelists.sqlite.bz2 100% |=====| 2.6 MB 00:10
--> Processing Dependency: gjdoc for package: java-1.4.2-gcj-compat
--> Running transaction check
---> Package apr-util.i386 0:1.2.7-7.el5 set to be updated
--> Processing Dependency: libpq.so.4 for package: apr-util
---> Package apr.i386 0:1.2.7-11 set to be updated
---> Package gjdoc.i386 0:0.7.7-12.el5 set to be updated
--> Processing Dependency: antlr for package: gjdoc
---> Package tzdata-java.noarch 0:2007k-2.el5.centos set to be updated
---> Package ca-certificates.noarch 0:2008-6 set to be updated
---> Package giflib.i386 0:4.1.3-7.1.el5.1 set to be updated
--> Running transaction check
---> Package postgresql-libs.i386 0:8.1.11-1.el5_1.1 set to be updated
---> Package antlr.i386 0:2.7.6-4jpp.2 set to be updated
--> Finished Dependency Resolution

```

Dependencies Resolved

```

=====
Package            Arch    Version      Repository    Size
=====

```

Installing:

```
centos-ds          i386    8.0.0-1.4.el5.centos.4  c5-testing    3.2 k
```

Installing for dependencies:

adminutil	i386	1.1.7-3.el5.centos.1	c5-testing	66 k
antlr	i386	2.7.6-4jpp.2	base	978 k
apr	i386	1.2.7-11	base	122 k
apr-util	i386	1.2.7-7.el5	base	76 k
ca-certificates	noarch	2008-6	c5-testing	84 k
centos-admin-console	noarch	8.0.0-11.el5.centos.4	c5-testing	238 k
centos-ds-admin	i386	8.0.4-3.el5.centos.1	c5-testing	350 k
centos-ds-base	i386	8.0.4-7.el5.centos.0	c5-testing	1.6 M
centos-ds-console	noarch	8.0.0-11.el5.centos.4	c5-testing	1.4 M
centos-idm-console	i386	1.0.0-17.el5.centos.4	c5-testing	74 k
cyrus-sasl-gssapi	i386	2.1.22-4	base	28 k
cyrus-sasl-md5	i386	2.1.22-4	base	45 k
giflib	i386	4.1.3-7.1.el5.1	base	39 k
gjdock	i386	0.7.7-12.el5	base	793 k
httpd	i386	2.2.8-1.el5s2.centos	c5-testing	1.0 M
idm-console-framework	noarch	1.1.1-0.el5.centos.4	c5-testing	1.0 M
java-1.4.2-gcj-compat	i386	1.4.2.0-40jpp.115	base	29 k
java-1.6.0-openjdk	i386	1:1.6.0.0-0.16.b09.el5.centos	c5-testing	35 M
jpackage-utils	noarch	1.7.5-1jpp.1.el5.centos	c5-testing	64 k
jss	i386	4.2.4-41.el5.centos.4	c5-testing	680 k
ldapjdk	i386	4.18-2jpp.3.el5	base	782 k
libicu	i386	3.6-5.11.1	base	5.2 M
mod_nss	i386	1.0.3-4.el5	base	79 k
mozldap	i386	6.0.5-1.el5	base	132 k
mozldap-tools	i386	6.0.5-1.el5	base	139 k
net-snmp-libs	i386	1:5.3.1-24.el5_2.2	updates	1.2 M
perl-Mozilla-LDAP	i386	1.5.2-4.el5	base	181 k
postgresql-libs	i386	8.1.11-1.el5_1.1	base	196 k
svrcore	i386	4.0.4-3.el5	base	14 k
tzdata-java	noarch	2007k-2.el5.centos	c5-testing	167 k

Transaction Summary

=====

Install 31 Package(s)
 Update 0 Package(s)
 Remove 0 Package(s)

Total download size: 51 M

Is this ok [y/N]: y

Downloading Packages:

(1/31): giflib-4.1.3-7.1. 100% |=====| 39 kB 00:00
 (2/31): idm-console-frame 100% |=====| 1.0 MB 00:04
 (3/31): java-1.4.2-gcj-co 100% |=====| 29 kB 00:00
 (4/31): ca-certificates-2 100% |=====| 84 kB 00:00

(5/31): mod_nss-1.0.3-4.e 100% |=====| 79 kB 00:00
(6/31): libicu-3.6-5.11.1 100% |=====| 5.2 MB 00:20
(7/31): net-snmp-libs-5.3 100% |=====| 1.2 MB 00:04
(8/31): antlr-2.7.6-4jpp. 100% |=====| 978 kB 00:03
(9/31): postgresql-libs-8 100% |=====| 196 kB 00:00
(10/31): adminutil-1.1.7- 100% |=====| 66 kB 00:00
(11/31): tzdata-java-2007 100% |=====| 167 kB 00:00
(12/31): centos-ds-base-8 100% |=====| 1.6 MB 00:06
(13/31): httpd-2.2.8-1.el 100% |=====| 1.0 MB 00:03
(14/31): centos-ds-admin- 100% |=====| 350 kB 00:01
(15/31): cyrus-sasl-gssap 100% |=====| 28 kB 00:00
(16/31): gjdoc-0.7.7-12.e 100% |=====| 793 kB 00:02
(17/31): centos-admin-con 100% |=====| 238 kB 00:01
(18/31): java-1.6.0-openj 100% |=====| 35 MB 02:22
(19/31): cyrus-sasl-md5-2 100% |=====| 45 kB 00:00
(20/31): mozdap-6.0.5-1. 100% |=====| 132 kB 00:00
(21/31): mozdap-tools-6. 100% |=====| 139 kB 00:00
(22/31): centos-idm-conso 100% |=====| 74 kB 00:00
(23/31): perl-Mozilla-LDA 100% |=====| 181 kB 00:00
(24/31): jss-4.2.4-41.el5 100% |=====| 680 kB 00:02
(25/31): apr-1.2.7-11.i38 100% |=====| 122 kB 00:00
(26/31): apr-util-1.2.7-7 100% |=====| 76 kB 00:00
(27/31): ldapjdk-4.18-2jp 100% |=====| 782 kB 00:02
(28/31): centos-ds-8.0.0- 100% |=====| 3.2 kB 00:00
(29/31): svrcore-4.0.4-3. 100% |=====| 14 kB 00:00
(30/31): centos-ds-consol 100% |=====| 1.4 MB 00:05
(31/31): jpackage-utils-1 100% |=====| 64 kB 00:00

warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID 7203f491

Importing GPG key 0x7203F491 "CentOS-testing (CentOS Developers testing key) <centos@centos.org>" from <http://dev.centos.org/centos/RPM-GPG-KEY-CentOS-testing>

Is this ok [y/N]: y

Running rpm_check_debug

Running Transaction Test

Finished Transaction Test

Transaction Test Succeeded

Running Transaction

Installing: jpackage-utils ##### [1/31]

Installing: libicu ##### [2/31]

Installing: svrcore ##### [3/31]

Installing: mozdap ##### [4/31]

Installing: perl-Mozilla-LDAP ##### [5/31]

Installing: apr ##### [6/31]

Installing: mozdap-tools ##### [7/31]

Installing: adminutil ##### [8/31]

Installing: giflib ##### [9/31]

```
Installing: ca-certificates      ##### [10/31]
Installing: net-snmp-libs       ##### [11/31]
Installing: postgresql-libs    ##### [12/31]
Installing: apr-util           ##### [13/31]
Installing: httpd               ##### [14/31]
Installing: mod_nss             ##### [15/31]
```

mod_nss certificate database generated.

```
Installing: tzdata-java        ##### [16/31]
Installing: cyrus-sasl-gssapi   ##### [17/31]
Installing: cyrus-sasl-md5      ##### [18/31]
Installing: centos-ds-base     ##### [19/31]
Installing: centos-ds-admin     ##### [20/31]
Installing: centos-ds-console   ##### [21/31]
Installing: centos-admin-console ##### [22/31]
Installing: java-1.6.0-openjdk  ##### [23/31]
Installing: java-1.4.2-gcj-compat ##### [24/31]
Installing: ldapjdk            ##### [25/31]
Installing: jss                 ##### [26/31]
Installing: idm-console-framework ##### [27/31]
Installing: centos-idm-console  ##### [28/31]
Installing: centos-ds          ##### [29/31]
Installing: gjdoc               ##### [30/31]
Installing: antlr              ##### [31/31]
```

Installed: centos-ds.i386 0:8.0.0-1.4.el5.centos.4

Dependency Installed: adminutil.i386 0:1.1.7-3.el5.centos.1 antlr.i386 0:2.7.6-4jpp.2 apr.i386 0:1.2.7-11 apr-util.i386 0:1.2.7-7.el5 ca-certificates.noarch 0:2008-6 centos-admin-console.noarch 0:8.0.0-11.el5.centos.4 centos-ds-admin.i386 0:8.0.4-3.el5.centos.1 centos-ds-base.i386 0:8.0.4-7.el5.centos.0 centos-ds-console.noarch 0:8.0.0-11.el5.centos.4 centos-idm-console.i386 0:1.0.0-17.el5.centos.4 cyrus-sasl-gssapi.i386 0:2.1.22-4 cyrus-sasl-md5.i386 0:2.1.22-4 giflib.i386 0:4.1.3-7.1.el5.1 gjdoc.i386 0:0.7.7-12.el5 httpd.i386 0:2.2.8-1.el5s2.centos idm-console-framework.noarch 0:1.1.1-0.el5.centos.4 java-1.4.2-gcj-compat.i386 0:1.4.2.0-40jpp.115 java-1.6.0-openjdk.i386 1:1.6.0.0-0.16.b09.el5.centos jpackage-utils.noarch 0:1.7.5-1jpp.1.el5.centos jss.i386 0:4.2.4-41.el5.centos.4 ldapjdk.i386 0:4.18-2jpp.3.el5 libicu.i386 0:3.6-5.11.1 mod_nss.i386 0:1.0.3-4.el5 mozldap.i386 0:6.0.5-1.el5 mozldap-tools.i386 0:6.0.5-1.el5 net-snmp-libs.i386 1:5.3.1-24.el5_2.2 perl-Mozilla-LDAP.i386 0:1.5.2-4.el5 postgresql-libs.i386 0:8.1.11-1.el5_1.1 svrcore.i386 0:4.0.4-3.el5 tzdata-java.noarch 0:2007k-2.el5.centos

Complete!

[root@dirserver1 ~]#

7 Verificando la versión de java en uso:

[morenisco@dirserver1 ~]\$ rpm -qa | grep java

java-1.6.0-openjdk-1.6.0.0-0.16.b09.el5.centos

tzdata-java-2007k-2.el5.centos

java-1.4.2-gcj-compat-1.4.2.0-40jpp.115

[morenisco@dirserver1 ~]\$ java -version

```
java version "1.6.0"
OpenJDK Runtime Environment (build 1.6.0-b09)
OpenJDK Client VM (build 1.6.0-b09, mixed mode)
[morenisco@dirserver1 ~]$
```

8 Configurando el servicio de directorio

En esta sección aparece con negrita las líneas en las cuales hay que responder, o simplemente asentir presionando enter.

Ejecutar el utilitario de configuración:

```
[root@dirserver1 ~]# /usr/sbin/setup-ds-admin.pl
```

=====

This program will set up the CentOS Directory and Administration Servers.

It is recommended that you have "root" privilege to set up the software.

Tips for using this program:

- Press "Enter" to choose the default and go to the next screen
- Type "Control-B" then "Enter" to go back to the previous screen
- Type "Control-C" to cancel the setup program

Would you like to continue with set up? [yes]: yes

=====

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Do you agree to the license terms? [no]: yes

=====

Your system has been scanned for potential problems, missing patches, etc. The following output is a report of the items found that need to be addressed before running this software in a production environment.

CentOS Directory Server system tuning analysis version 10-AUGUST-2007.

NOTICE : System is i686-unknown-linux2.6.18-92.el5 (1 processor).

WARNING: 503MB of physical memory is available on the system. 1024MB is recommended for best performance on large production system.

NOTICE : The net.ipv4.tcp_keepalive_time is set to 7200000 milliseconds (120 minutes). This may cause temporary server congestion from lost client connections.

WARNING: There are only 1024 file descriptors (hard limit) available, which limit the number of simultaneous connections.

WARNING: There are only 1024 file descriptors (soft limit) available, which limit the number of simultaneous connections.

Would you like to continue? [no]: yes

=====

Choose a setup type:

- 1. Express
Allows you to quickly set up the servers using the most common options and pre-defined defaults. Useful for quick evaluation of the products.
- 2. Typical
Allows you to specify common defaults and options.
- 3. Custom
Allows you to specify more advanced options. This is recommended for experienced server administrators only.

To accept the default shown in brackets, press the Enter key.

Choose a setup type [2]:

=====

Enter the fully qualified domain name of the computer on which you're setting up server software. Using the form <hostname>.<domainname>
Example: eros.example.com.

To accept the default shown in brackets, press the Enter key.

Computer name [dirserver1.cdsl.ci]:

=====

The servers must run as a specific user in a specific group. It is strongly recommended that this user should have no privileges

on the computer (i.e. a non-root user). The setup procedure will give this user/group some permissions in specific paths/files to perform server-specific operations.

If you have not yet created a user and group for the servers, create this user and group using your native operating system utilities.

System User [nobody]:
System Group [nobody]:

=====

Server information is stored in the configuration directory server. This information is used by the console and administration server to configure and manage your servers. If you have already set up a configuration directory server, you should register any servers you set up or create with the configuration server. To do so, the following information about the configuration server is required: the fully qualified host name of the form <hostname>.<domainname>(e.g. hostname.example.com), the port number (default 389), the suffix, the DN and password of a user having permission to write the configuration information, usually the configuration directory administrator, and if you are using security (TLS/SSL). If you are using TLS/SSL, specify the TLS/SSL (LDAPS) port number (default 636) instead of the regular LDAP port number, and provide the CA certificate (in PEM/ASCII format).

If you do not yet have a configuration directory server, enter 'No' to be prompted to set up one.

Do you want to register this software with an existing **configuration directory server? [no]:**

=====

Please enter the administrator ID for the configuration directory server. This is the ID typically used to log in to the console. You will also be prompted for the password.

Configuration directory server
administrator ID [admin]:
Password:
Password (confirm):

=====

The information stored in the configuration directory server can be separated into different Administration Domains. If you are managing multiple software releases at the same time, or managing information about multiple domains, you may use the Administration Domain to keep them separate.

If you are not using administrative domains, press Enter to select the default. Otherwise, enter some descriptive, unique name for the administration domain, such as the name of the organization responsible for managing the domain.

Administration Domain [cdsl.cl]:

=====
The standard directory server network port number is 389. However, if you are not logged as the superuser, or port 389 is in use, the default value will be a random unused port number greater than 1024. If you want to use port 389, make sure that you are logged in as the superuser, that port 389 is not in use.

Directory server network port [389]:

=====
Each instance of a directory server requires a unique identifier. This identifier is used to name the various instance specific files and directories in the file system, as well as for other uses as a server instance identifier.

Directory server identifier [dirserver1]:

=====
The suffix is the root of your directory tree. The suffix must be a valid DN. It is recommended that you use the dc=domaincomponent suffix convention. For example, if your domain is example.com, you should use dc=example,dc=com for your suffix. Setup will create this initial suffix for you, but you may have more than one suffix. Use the directory server utilities to create additional suffixes.

Suffix [dc=cdsl, dc=cl]:

=====
Certain directory server operations require an administrative user. This user is referred to as the Directory Manager and typically has a

bind Distinguished Name (DN) of cn=Directory Manager.
You will also be prompted for the password for this user. The password must be at least 8 characters long, and contain no spaces.

Directory Manager DN [cn=Directory Manager]:

Password:

Password (confirm):

=====
The Administration Server is separate from any of your web or application servers since it listens to a different port and access to it is restricted.

Pick a port number between 1024 and 65535 to run your Administration Server on. You should NOT use a port number which you plan to run a web or application server on, rather, select a number which you will remember and which will not be used for anything else.

Administration port [9830]:

=====
The interactive phase is complete. The script will now set up your servers. Enter No or go Back if you want to change something.

Are you ready to set up your servers? [yes]:

Creating directory server . . .
Your new DS instance 'dirserver1' was successfully created.
Creating the configuration directory server . . .
Beginning Admin Server creation . . .
Creating Admin Server files and directories . . .
Updating adm.conf . . .
Updating admpw . . .
Registering admin server with the configuration directory server . . .
Updating adm.conf with information from configuration directory server . . .
Updating the configuration for the httpd engine . . .
Starting admin server . . .
The admin server was successfully started.
Admin server was successfully created, configured, and started.
Exiting . . .
Log file is '/tmp/setupmKPwo4.log'

[root@dirserver1 ~]#

9 Algunas comprobaciones post instalación/configuración

9.1 Verificando si se inició el servicio de directorio

```
[root@dirserver1 ~]# /etc/init.d/dirsrv status
dirsrv dirserver1 (pid 4879) is running...
```

==> está corriendo.

9.2 Verificando si se “levantó el puerto” 389

```
[root@dirserver1 ~]# netstat -tln | grep 389
tcp      0      0 :::389          :::*             LISTEN
```

==> está escuchando.

Veamos qué programa está utilizando el puerto 389:

```
[root@dirserver1 ~]# lsof -i:389
COMMAND  PID  USER  FD  TYPE DEVICE SIZE NODE NAME
ns-slapd 6394 nobody  7u  IPv6 18701    TCP *:ldap (LISTEN)
[root@dirserver1 ~]#
```

Ok, el binario ns-slapd es quien está implementando el servicio y ocupando el puerto 389, solo para saber...

9.3 Comprobando si se inició el servicio de administración

Esto es importantísimo, ya que a través de este servicio podremos logearnos a la aplicación de administración cuando sea necesario, desde donde se tiene control del árbol del directorio, se puede realizar operaciones como detención, inicio y reinicio del servicio de directorio (naturalmente también se puede hacer desde una línea de comandos), configurar Multi Master Replication, etc.

```
[root@dirserver1 ~]# /etc/init.d/dirsrv-admin status
dirsrv-admin (pid 6482) is running...
```

==> Ok, está corriendo.

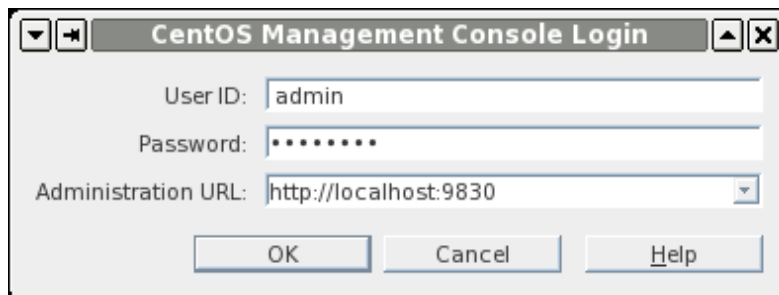
10 Lanzando la consola de administración

Lanzamos la consola de administración con el comando que se muestra en la imagen:

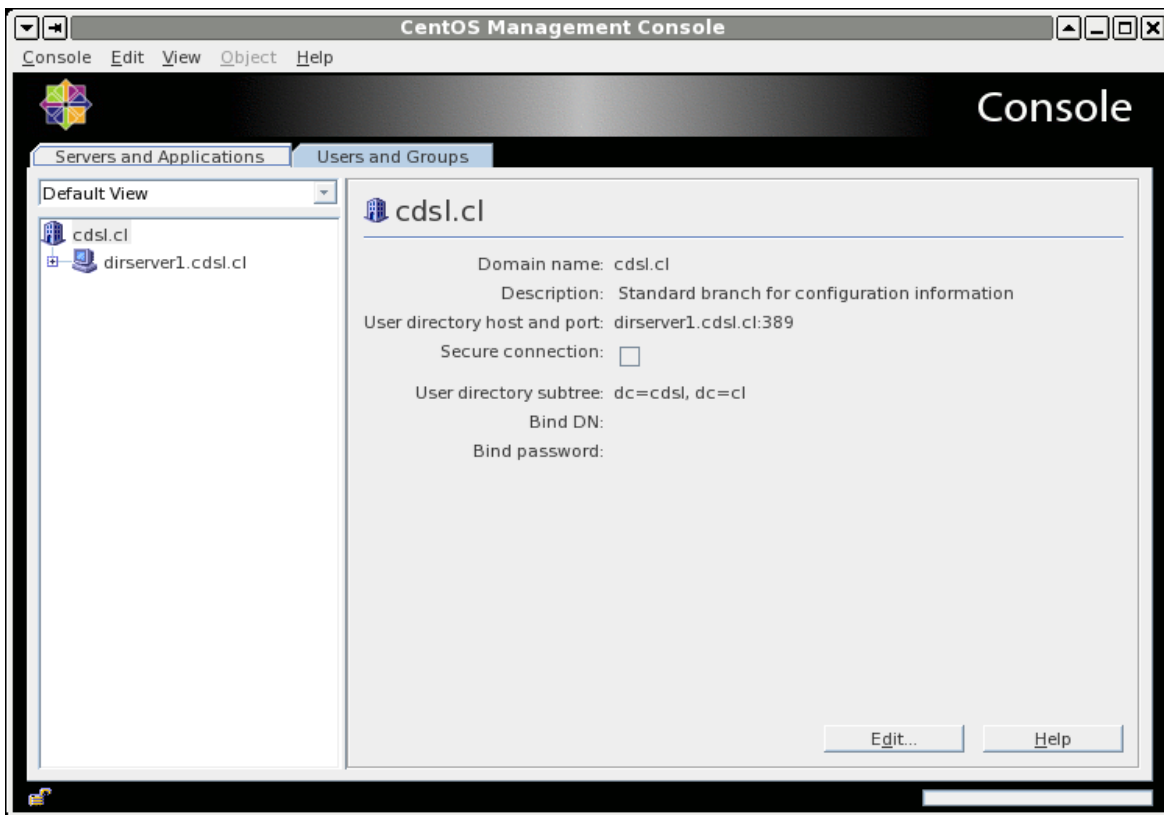


Nota: el puerto 9830 se seteo durante el proceso de configuración. Y si especificaron otro, entonces deberían reemplazarlo en el comando.

Luego se presenta la ventana de login, en donde se debe ingresar el login (por defecto es admin, a menos que hayan especificado otro durante el proceso de configuración), como se ve en la siguiente imagen:



Finalmente, tenemos acceso a la consola de administración:



11 Autenticando a un usuario y realizando una búsqueda

Esta prueba tiene por objetivo probar en forma simple que el servicio de directorio está funcionando, por medio de realizar dos operaciones básicas:

- bind
- search

El bind significa acceder con algún tipo de credenciales al sistema ldap, ya sea un acceso anónimo, que no es en si una cuenta anónima, o especificando un usuario y una password (muchas veces se permite el bind y search anónimo, o con un usuario y sin password, pero por cierto no es lo más seguro).

En esta parte creé un usuario, el cual tiene por DN (distinguished name, o nombre distintivo por decirlo de alguna forma) lo siguiente :

```
"uid=lvivero,ou=people,dc=cdsl,dc=cl"
```

Entonces, utilizando una de las herramientas que provee openldap-clients.i386, ldapsearch, realicé una búsqueda simple, especificando el DN y password del usuario, de la siguiente forma:

```
[morenisco@dirserver1 ~]$ ldapsearch -x -D "uid=lvivero,ou=people,dc=cdsl,dc=cl" -w L34rn1n6 -b "ou=people,dc=cdsl,dc=cl" "objectclass=*"
# extended LDIF
#
# LDAPv3
# base <ou=people,dc=cdsl,dc=cl> with scope subtree
# filter: objectclass=*
# requesting: ALL
#

# People, cdsl.cl
dn: ou=People, dc=cdsl, dc=cl
objectClass: top
objectClass: organizationalunit
ou: People

# LVivero, People, cdsl.cl
dn: uid=LVivero,ou=People, dc=cdsl, dc=cl
mail: morenisco@noc-root.net
uid: LVivero
givenName: Luis
objectClass: top
objectClass: person
objectClass: organizationalPerson
objectClass: inetorgperson
sn: Vivero
cn: Luis Vivero

# search result
search: 2
result: 0 Success

# numResponses: 3
# numEntries: 2
```

Como se observa, se obtuvo la salida fruto de la búsqueda, permitida por un bind correcto.
Si uno ingresa mal la password, o si la autentificación no funciona, entonces obtendríamos lo siguiente:

```
[morenisco@dirserver1 ~]$ ldapsearch -x -D "uid=lvivero,ou=people,dc=cdsl,dc=cl" -w L34rn1n7 -b "ou=people,dc=cdsl,dc=cl" "objectclass=*"
ldap_bind: Invalid credentials (49)
```

12 Anexo 1: GNU Free Documentation License

Version 1.3, 3 November 2008

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