Instalación Segundo Servidor Maestro LDAP de Zimbra 10.1 (Ubuntu 22.04)

El servidor LDAP maestro debe estar en ejecución cuando se instalan los servidores LDAP secundarios.

Passwords necesarios.

- Zimbra 10 admin LDAP password
- LDAP replication password
- NGINX LDAP password
- Amavis LDAP password
- Postfix LDAP password

Para encontrar los passwords ejecute en el servidor maestro con usuario zimbra:

zmlocalconfig -s | grep passw | grep ldap

zimbra@ldapm01:~/libexec$ zmlocalconfig -s | grep passw | grep ldap
ldap_amavis_password = 123456
ldap_bes_searcher_password = 123456
ldap_nginx_password = 123456
ldap_postfix_password = 123456
ldap_replication_password = 123456
ldap_root_password = 123456
zimbra_ldap_password = 123456

1.- Actualización del Sistema Operativo.

root@ldapm01: sudo apt update
root@ldapm01: sudo apt upgrade -y

2.- Asignamos IP estática, grateway y DNS.

root@ldapm01:/# nano /etc/netplan/00-installer-config.yaml

This is the network config written by 'subiquity'

```
network:
 ethernets:
  eth0:
   dhcp4: no
   addresses: [192.168.1.12/24]
   gateway4: 192.168.1.1
   nameservers:
    addresses: [192.168.1.6]
 version: 2
```

Aplicamos los cambios, si está conectado vía ssh perderá conexión, intente conectarse con la nueva IP asignada

root@ldapm01:/# netplan generate
root@ldapm01:/# netplan apply

3.- Validamos todos los registros del host del ldap master principal y del nuevo ldapm02

root@ldapm02:/# dig A ldapm01.zimbra.com.ve
;; ANSWER SECTION:
ldapm01.zimbra.com.ve.   0   IN   A   192.168.1.12

root@ldapm02:/# dig A ldapm02.zimbra.com.ve
;; ANSWER SECTION:
ldapm02.zimbra.com.ve.   0   IN   A   192.168.1.17

4.- Modificar la tabla host para el nuevo ldap maestro (ldapm02.zimbra.com.ve)

Editamos la tabla hosts, agregamos el nombre e IP y desactivamos IPv6

root@ldapm02:/# nano /etc/hosts
127.0.0.1 localhost
192.168.1.17   ldapm02.zimbra.com.ve   ldapm02

 # The following lines are desirable for IPv6 capable hosts
#::1   ip6-localhost ip6-loopback localhost
#fe00::0 ip6-localnet
#ff00::0 ip6-mcastprefix
#ff02::1 ip6-allnodes
#ff02::2 ip6-allrouters

5.- Cambiamos el nombre del hostname

root@ldapm02:/# nano /etc/hostname

ldapm02.zimbra.com.ve

root@ldapm02:/# reboot

6.- Validación de a Fecha del servidor o instalación del servicio NTP.

Verificar si está instalado ntp
apt show ntp

Instalar ntp
apt install ntp

Detener el ntp
/etc/init.d/ntp stop

Editamos el documento de configuración
```
nano /etc/ntp.conf
```

Sincronizar con el servidor ntp
ntpdate xxxx.yyyy.zzzz.tttt

Iniciar de nuevo el servicio ntp
/etc/init.d/ntp start

Activar el sistema de replicación en el ldap maestro principal ldapm01.zimbra.com.ve

Antes de poder habilitar la función de replicación de múltiples maestros, debe conocer el nombre de host del primer maestro secundario que se agrega al grupo. El nombre de host se ingresa cuando habilita la función. Una vez que habilita la función de replicación de múltiples maestros, no necesita ejecutar el comando nuevamente.

Cuando se ejecuta zmlocalconfig por primera vez, los servidores LDAP maestros se configuran de la siguiente manera:

El ID del primer servidor LDAP maestro se establece en 1.

El servidor LDAP maestro se coloca en un grupo con un servidor LDAP secundario que escucha LDAP en el puerto 389.

El ID de replicación se establece en 100 de manera predeterminada en el servidor secundario.

Las escrituras iniciadas desde el servidor van al servidor LDAP maestro-1 de manera predeterminada. Si el servidor LDAP maestro-1 está inactivo, las escrituras se mueven al servidor LDAP maestro-2.

Para habilitar la función, ejecute en el servidor maestro principal con el usuario zimbra:

zimbra@ldapm01:~$ cd /opt/zimbra/libexec/
zimbra@ldapm01:~/libexec$ ./zmldapenable-mmr -s 1 -m ldap://ldapm02.zimbra.com.ve:389/

7.- Instalación del segundo servidor LDAP MAESTRO.

root@ldapm02:/usr/local/src/zcs# ./install.sh

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FOR ZIMBRA NETWORK EDITION

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Do you agree with the terms of the software license agreement? [N] y

Use Zimbra's package repository [Y] y

Importing Zimbra GPG key

Configuring package repository

Checking for installable packages

Found zimbra-core (local)

Found zimbra-ldap (local)
Found zimbra-logger (local)
Found zimbra-mta (local)
Found zimbra-dnscache (local)
Found zimbra-snmp (local)
Found zimbra-license-daemon (repo)
Found zimbra-store (local)
Found zimbra-apache (local)
Found zimbra-spell (local)
Found zimbra-convertd (local)
Found zimbra-memcached (repo)
Found zimbra-proxy (local)
Found zimbra-archiving (local)
Found zimbra-onlyoffice (repo)
Found zimbra-license-tools (local)
Found zimbra-license-extension (local)
Found zimbra-network-store (local)
Found zimbra-modern-ui (repo)
Found zimbra-modern-zimlets (repo)
Found zimbra-zimlet-document-editor (repo)
Found zimbra-zimlet-classic-document-editor (repo)
Found zimbra-zimlet-classic-set-default-client (repo)
Found zimbra-patch (repo)
Found zimbra-mta-patch (repo)
Found zimbra-proxy-patch (repo)
Found zimbra-ldap-patch (repo)

Select the packages to install

Install zimbra-ldap [Y] y
Install zimbra-logger [Y] n
Install zimbra-mta [Y] n
Install zimbra-dnscache [N] n
Install zimbra-snmp [Y] y
Install zimbra-license-daemon [Y] n
Install zimbra-store [Y] n
Install zimbra-apache [Y] n
Install zimbra-spell [Y] n
Install zimbra-memcached [Y] n
Install zimbra-proxy [Y] n
Install zimbra-archiving [N] n
Install zimbra-onlyoffice [Y] n
Checking required space for zimbra-core

Installing:
   zimbra-core
   zimbra-ldap
   zimbra-snmp
   zimbra-license-tools
   zimbra-ldap-patch

The system will be modified. Continue? [N] y

Beginning Installation - see /tmp/install.log.GakHT5tv for details...

         zimbra-core-components will be downloaded and installed.
          zimbra-timezone-data will be installed.
         zimbra-common-core-jar will be installed.

zimbra-common-mbox-conf-attrs will be installed.
zimbra-common-mbox-conf-msgs will be installed.
zimbra-common-mbox-native-lib will be installed.
zimbra-common-mbox-conf-rights will be installed.
zimbra-common-mbox-conf will be installed.
zimbra-common-mbox-db will be installed.
zimbra-common-mbox-docs will be installed.
zimbra-common-core-libs will be installed.
zimbra-core will be installed.
zimbra-ldap-components will be downloaded and installed.
zimbra-ldap will be installed.
zimbra-snmp-components will be downloaded and installed.
zimbra-snmp will be installed.
zimbra-license-tools will be installed.
zimbra-ldap-patch will be downloaded and installed (later).

Downloading packages (3):
    zimbra-core-components
    zimbra-ldap-components
    zimbra-snmp-components
        ...done

Removing /opt/zimbra
Removing zimbra crontab entry...done.
Cleaning up zimbra init scripts...done.
Cleaning up /etc/security/limits.conf...done.

Finished removing Zimbra Collaboration Server.

Installing repo packages (3):
    zimbra-core-components

```
      zimbra-ldap-components
      zimbra-snmp-components
         ...done

   Installing local packages (14):
      zimbra-timezone-data
      zimbra-common-core-jar
      zimbra-common-mbox-conf-attrs
      zimbra-common-mbox-conf-msgs
      zimbra-common-mbox-native-lib
      zimbra-common-mbox-conf-rights
      zimbra-common-mbox-conf
      zimbra-common-mbox-db
      zimbra-common-mbox-docs
      zimbra-common-core-libs
      zimbra-core
      zimbra-ldap
      zimbra-snmp
      zimbra-license-tools
         ...done

   Installing extra packages (1):
      zimbra-ldap-patch
         ...done

   Running Post Installation Configuration:
   Copying /tmp/install.log.GakHT5tv to /opt/zimbra/log
   Operations logged to /tmp/zmsetup.20240824-214529.log
   Installing LDAP configuration database...done.
   Setting defaults...
```

DNS ERROR resolving MX for ldapm02.zimbra.com.ve
It is suggested that the domain name have an MX record configured in DNS
Change domain name? [Yes] yes
Create domain: [ldapm02.zimbra.com.ve] zimbra.com.ve
done.
Checking for port conflicts

Main menu

  1) Common Configuration:
  2) zimbra-ldap: Enabled
  3) zimbra-snmp: Enabled
  4) Enable default backup schedule: yes
  s) Save config to file
  x) Expand menu
  q) Quit

*** CONFIGURATION COMPLETE - press 'a' to apply

Select from menu, or press 'a' to apply config (? - help) 1

Common configuration

  1) Hostname: ldapm02.zimbra.com.ve
  2) Ldap master host: ldapm02.zimbra.com.ve
  3) Ldap port: 389
  4) Ldap Admin password: set
  5) Store ephemeral attributes outside Ldap: no
  6) Secure interprocess communications: yes
  7) TimeZone: UTC
  8) IP Mode: ipv4
  9) Default SSL digest: sha256

Rif. j505838490
Caracas – Venezuela.

Select, or 'r' for previous menu [r] 2

Please enter the ldap server hostname: [ldapm02.zimbra.com.ve] ldapm01.zimbra.com.ve

Common configuration

  1) Hostname: ldapm02.zimbra.com.ve
  2) Ldap master host: ldapm01.zimbra.com.ve
  3) Ldap port: 389
  4) Ldap Admin password: set
  5) Store ephemeral attributes outside Ldap: no
  6) Secure interprocess communications: yes
  7) TimeZone: UTC
  8) IP Mode: ipv4
  9) Default SSL digest: sha256

Select, or 'r' for previous menu [r] 4

Password for ldap admin user (min 6 characters): [8VclU4J8GJ] 123456
Setting defaults from ldap...done.

Common configuration

  1) Hostname: ldapm02.zimbra.com.ve
  2) Ldap master host: ldapm01.zimbra.com.ve
  3) Ldap port: 389
  4) Ldap Admin password: set
  5) Store ephemeral attributes outside Ldap: yes
  6) Value for zimbraEphemeralBackendURL: ldap://default
  7) Secure interprocess communications: yes
  8) TimeZone: America/Caracas
  9) IP Mode: ipv4
 10) Default SSL digest: sha256

Select, or 'r' for previous menu [r] r

Main menu

  1) Common Configuration:
      +Hostname: ldapm02.zimbra.com.ve
      +Ldap master host: ldapm01.zimbra.com.ve
      +Ldap port: 389
      +Ldap Admin password: set
      +Store ephemeral attributes outside Ldap: yes
      +Value for zimbraEphemeralBackendURL: ldap://default
      +Secure interprocess communications: yes
      +TimeZone: America/Caracas
      +IP Mode: ipv4
      +Default SSL digest: sha256

  2) zimbra-ldap: Enabled
      +Create Domain: yes
      +Domain to create: zimbra.com.ve
      +Ldap replication type: replica
      +Ldap root password: set
******* +Ldap replication password: Not Verified

  3) zimbra-snmp: Enabled
  4) Enable default backup schedule: yes
  s) Save config to file
  x) Expand menu
  q) Quit

Address unconfigured (**) items and enable ldap replication on ldap master (? - help) 2

Ldap configuration

    1) Status: Enabled
    2) Create Domain: yes
    3) Domain to create: zimbra.com.ve
    4) Ldap replication type: replica
    5) Ldap root password: set
** 6) Ldap replication password: Not Verified

Select, or 'r' for previous menu [r] 4

Please enter the LDAP replication type (replica, mmr) [replica] mmr

Ldap configuration

    1) Status: Enabled
    2) Create Domain: yes
    3) Domain to create: zimbra.com.ve
    4) Ldap replication type: mmr
    5) Ldap Server ID: 2
    6) Ldap root password: set
** 7) Ldap replication password: Not Verified
    8) Ldap postfix password: set
    9) Ldap amavis password: set
    10) Ldap nginx password: set
    11) Ldap Bes Searcher password: set

Select, or 'r' for previous menu [r] 7

Password for ldap replication user (min 6 characters): [8VclU4J8GJ] 123456

Ldap configuration

1) Status: Enabled
2) Create Domain: yes
3) Domain to create: zimbra.com.ve
4) Ldap replication type: mmr
5) Ldap Server ID: 2
6) Ldap root password: set
7) Ldap replication password: set
8) Ldap postfix password: set
9) Ldap amavis password: set
10) Ldap nginx password: set
11) Ldap Bes Searcher password: set

Select, or 'r' for previous menu [r] 8

Password for ldap Postfix user (min 6 characters): [8VclU4J8GJ] 123456

Ldap configuration

1) Status: Enabled
2) Create Domain: yes
3) Domain to create: zimbra.com.ve
4) Ldap replication type: mmr
5) Ldap Server ID: 2
6) Ldap root password: set
7) Ldap replication password: set
8) Ldap postfix password: set
9) Ldap amavis password: set
10) Ldap nginx password: set
11) Ldap Bes Searcher password: set

Select, or 'r' for previous menu [r] 9

Password for ldap Amavis user (min 6 characters): [8VclU4J8GJ] 123456

Ldap configuration

  1) Status: Enabled
  2) Create Domain: yes
  3) Domain to create: zimbra.com.ve
  4) Ldap replication type: mmr
  5) Ldap Server ID: 2
  6) Ldap root password: set
  7) Ldap replication password: set
  8) Ldap postfix password: set
  9) Ldap amavis password: set
10) Ldap nginx password: set
11) Ldap Bes Searcher password: set

Select, or 'r' for previous menu [r] 10

Password for ldap Nginx user (min 6 characters): [8VclU4J8GJ] 123456

Ldap configuration

  1) Status: Enabled
  2) Create Domain: yes
  3) Domain to create: zimbra.com.ve
  4) Ldap replication type: mmr
  5) Ldap Server ID: 2
  6) Ldap root password: set

   7) Ldap replication password: set
   8) Ldap postfix password: set
   9) Ldap amavis password: set
  10) Ldap nginx password: set
  11) Ldap Bes Searcher password: set

Select, or 'r' for previous menu [r] r

Main menu

  1) Common Configuration:
  2) zimbra-ldap: Enabled
  3) zimbra-snmp: Enabled
  4) Enable default backup schedule: yes
  s) Save config to file
  x) Expand menu
  q) Quit

*** CONFIGURATION COMPLETE - press 'a' to apply

*** CONFIGURATION COMPLETE - press 'a' to apply
Select from menu, or press 'a' to apply config (? - help) a
Save configuration data to a file? [Yes] yes
Save config in file: [/opt/zimbra/config.6442]   enter
Saving config in /opt/zimbra/config.6442...done.
The system will be modified - continue? [No] yes
Operations logged to /tmp/zmsetup.20240824-214529.log

Setting local config values...done.
Initializing core config...Updating ldap_root_password and zimbra_ldap_password...done.
Setting up CA...done.
Deploying CA to /opt/zimbra/conf/ca ...done.
Creating zimbra-ldap SSL certificate...done.
Installing LDAP SSL certificate...done.
Creating server entry for ldapm02.zimbra.com.ve...done.
Setting Zimbra IP Mode...done.
Updating ldap_root_password and zimbra_ldap_password...Setting Postfix password...done.
Setting amavis password...done.
Setting nginx password...done.
done.
Enabling ldap replication...done.
Stopping ldap...done.
Checking ldap status....not running.
Starting ldap...done.
Setting ldap root password...done.
Setting ldap admin password...done.
Setting replication password...done.
Setting Postfix password...done.
Setting amavis password...done.
Setting nginx password...done.
Setting BES Searcher password...done.
Saving CA in ldap...done.
Saving SSL Certificate in ldap...done.
Updating zimbraLDAPSchemaVersion to version '1717060748'
Setting services on ldapm02.zimbra.com.ve...done.
Configuring SNMP...done.
Setting up syslog.conf...done.
Setting default backup schedule...Done

Setting ldap_common_tlsciphersuite...done.
Setting ldap_common_tlsprotocolmin...done.
Setting java options...done.
Checking ldap status....not running.
Starting ldap...done.
Starting servers...done.
Skipping creation of default domain GAL sync account - not a service node.
Setting up zimbra crontab...done.

Moving /tmp/zmsetup.20240824-214529.log to /opt/zimbra/log

Configuration complete - press return to exit

Cuando se complete la instalación, presione Enter para salir.

En todos los servidores actualizar ldap_master_url y ldap_url cada vez que se crea un nuevo ldap

Como usuario zimbra.

Actualice el atributo ldap_master_url para que contenga ambos maestros, ingrese este nuevo maestro como el primer maestro en la lista.

```
zmlocalconfig -e ldap_master_url="ldap://<<master-2.example.com>>:389
ldap://<<master-1.example.com>>:389"
```

zimbra@ldapm01:~/libexec$ zmlocalconfig -e ldap_master_url="ldap://ldapm02.zimbra.com.ve:389
ldap://ldapm01.zimbra.com.ve:389"

Actualice el atributo ldap_url para que contenga todos los ldap de consulta en cada servidor, ingrese este nuevo ldap como el primero en la lista.

zmlocalconfig -e ldap_url=" ldap://ldapm02.zimbra.com.ve:389 ldap://ldapm01.zimbra.com.ve:389"

Como observar los cambios:

zimbra@ldapm02:~$ zmlocalconfig | grep -i ldap_master_url
ldap_master_url = ldap://ldapm02.zimbra.com.ve:389 ldap://ldapm01.zimbra.com.ve:389

zimbra@ldapm02:~$ zmlocalconfig | grep -i ldap_url
ldap_url = ldap://ldapm02.zimbra.com.ve:389 ldap://ldapm01.zimbra.com.ve:389

NOTA:
Cuando se actualiza el ldap_url en los MTA se ejecuta el siguiente comando.

/opt/zimbra/libexec/zmmtainit

Supervisión del estado de los servidores LDAP Maestros.

Requisito de la función

Ejecute el script zmreplchk ubicado en /opt/zimbra/libexec.

Este script debe ejecutarse en un servidor Zimbra 10 que tenga un valor localconfig establecido para ldap_url que incluya todos los servidores maestros.

Códigos de error y explicaciones de estado

Con esta función se proporcionan los siguientes códigos de error de monitoreo y explicaciones de estado:

zimbra@ldapm02:~$ cd /opt/zimbra/libexec

zimbra@ldapm02:~/libexec$ ./zmreplchk

Master: ldap://ldapm02.zimbra.com.ve:389 ServerID: 2 Code: 0 Status: In Sync CSNs:
20240824234516.193133Z#000000#001#000000
Master: ldap://ldapm01.zimbra.com.ve:389 ServerID: 1 Code: 0 Status: In Sync CSNs:
20240824234516.193133Z#000000#001#000000

Error Code	Status	Description
0	In Sync	Los servidores están sincronizados actualmente.
1	No contact	No hay conexión con el servidor maestro y el sistema se cierra.
2	Stand-alone	El servidor maestro no tiene servidores de réplica y se considera un servidor maestro independiente.
3	Could not execute StartTLS	El servidor de réplica requiere StartTLS y falla.
4	Server down	El servidor de réplica está inactivo actualmente.
5	Unable to search	La búsqueda del CSN de contexto en el servidor de réplica falla.
6	Xw Xd Xh Xm Xs behind	El servidor de réplica deja de estar sincronizado. El estado indica la cantidad de tiempo que el servidor de réplica está detrás del servidor maestro en w=semanas, d=días, h=horas, m=minutos y s=segundos.