Configure Ezeelogin to authenticate using Windows_AD(Pam-Ldap) in ubuntu?

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Configure Ezeelogin to authenticate using Windows_AD(Pam-LDAP) in Ubuntu 16.x, 18.x, 20.x, 22.x ?

Overview: This article provides steps to integrate Windows-AD (PAM-LDAP) in Ubuntu for SSH authentication via Ezeelogin. It includes PHP-LDAP installation, LDAP configuration through the web GUI, and setting up PAM_LDAP for SSH access, ensuring seamless LDAP user import and configuration verification.

Integration of WINDOWS-AD (PAM-LDAP) in Ubuntu

Install and set up the Active Directory

Note: Make sure that the PHP-LDAP extension is installed on the server. Replace the PHP version in the below command.

```
root@gateway:~# apt-get install phpx.x-ldap

example :~# apt-get install php8.2-ldap

root@gateway:~# systemctl restart apache2
```

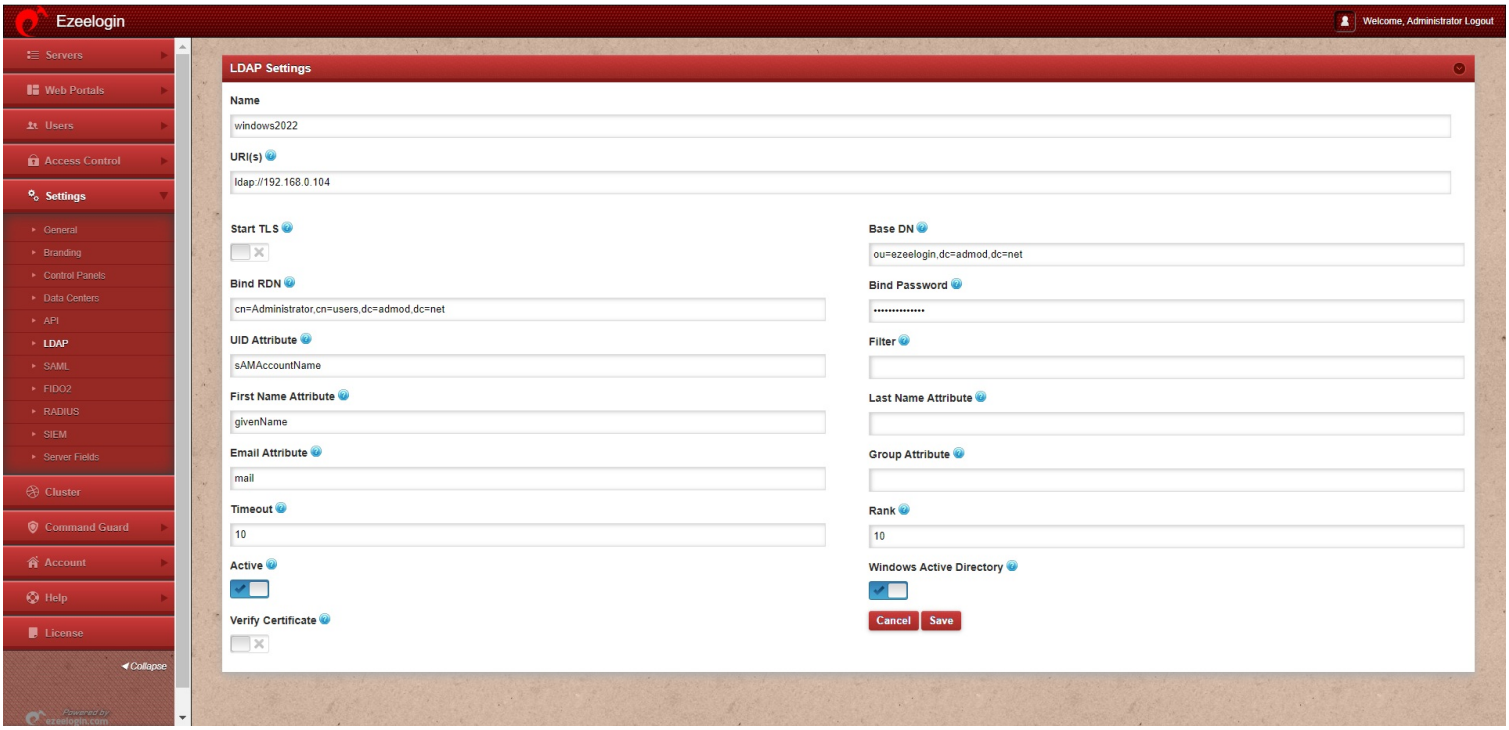
Step 1: Login to **Web-GUI** -> **open settings** -> **LDAP**

How to find base DN and bind RDN

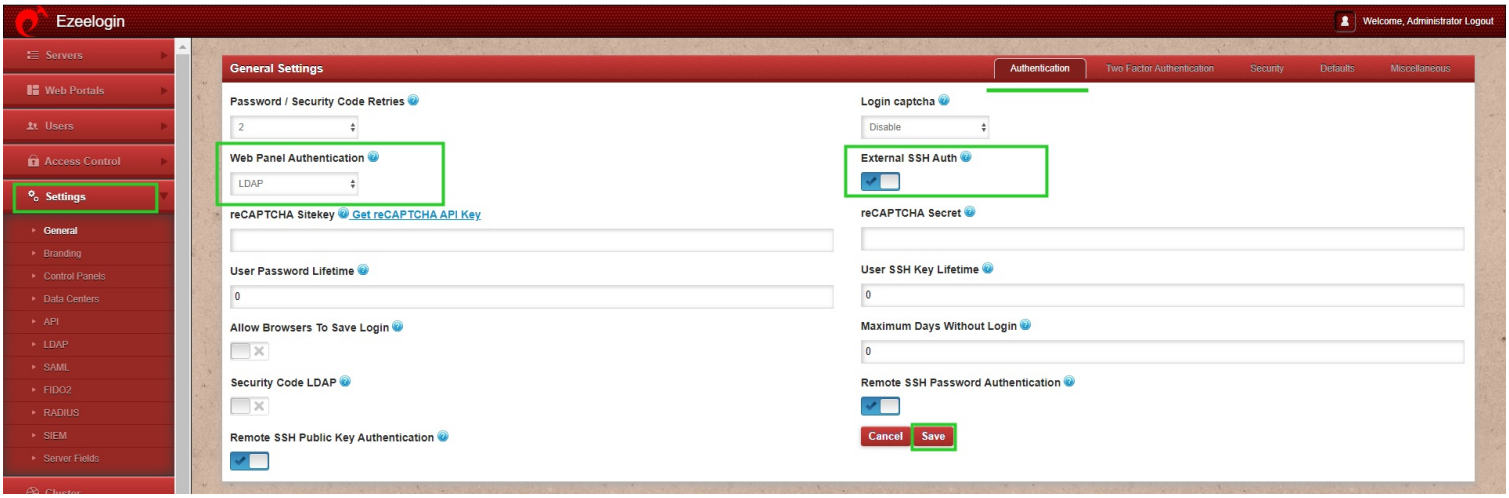
Step 2: Add the details of LDAP configurations & enable **Windows Active Directory.**

Multiple URIs or a list of URIs can be specified in the format:
ldaps://host.com:636/ ldaps://host.com:636/

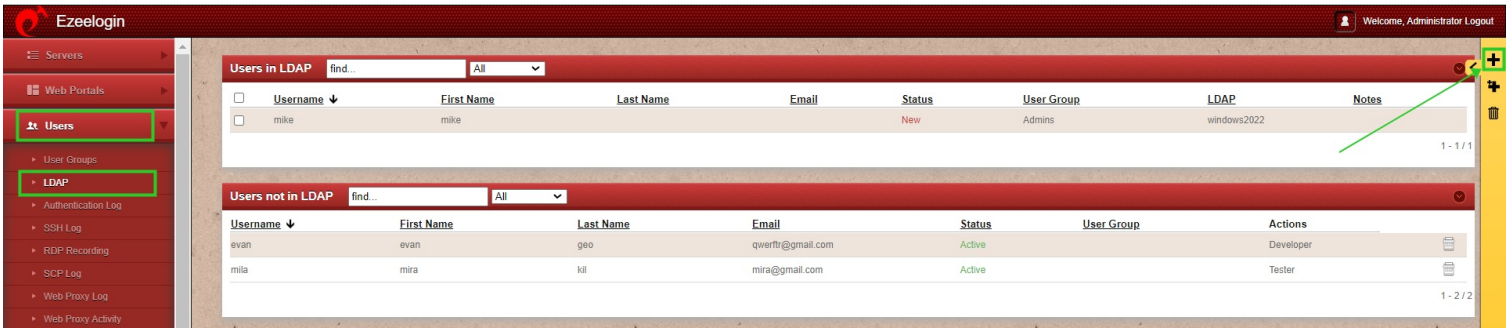
(Only the protocol, hostname, and port fields are allowed.)



Step 3: Open **Settings** -> **General** -> **Authentication** -> **Change web panel authentication to LDAP** & **enable External SSH Auth**

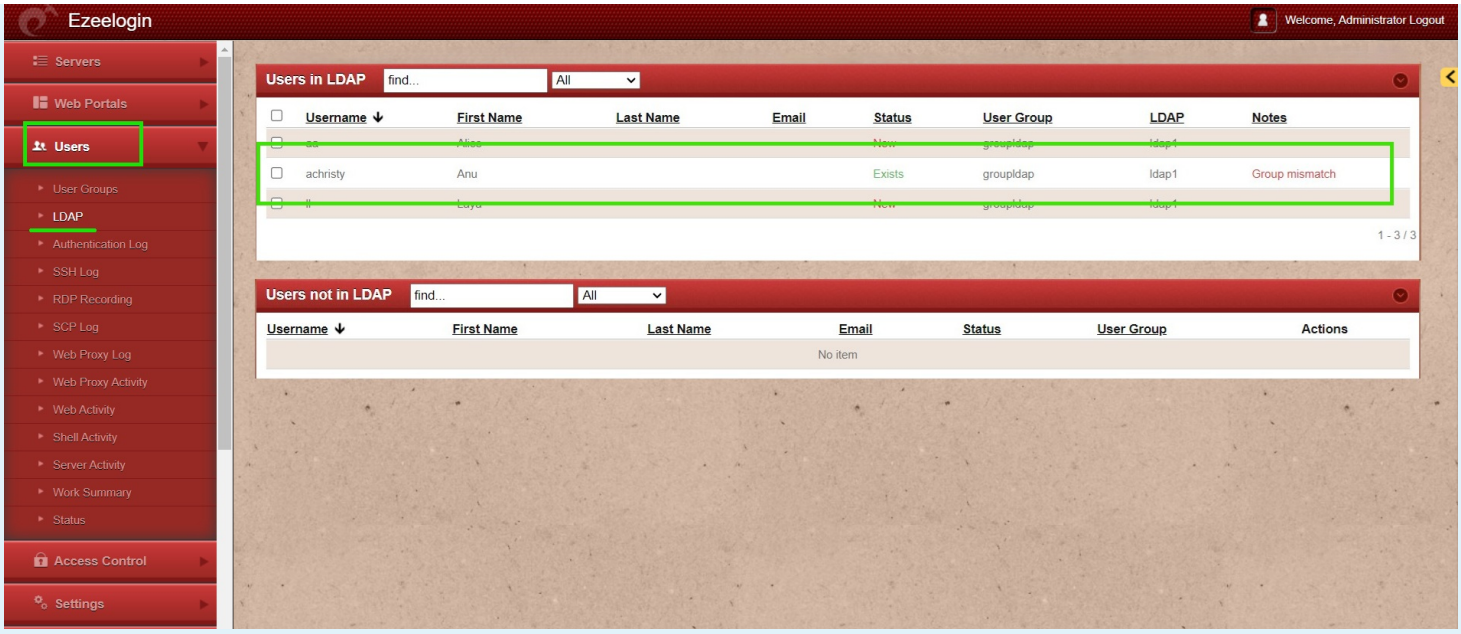


Step 4: Select the LDAP users and **import** them to Ezeelogin.



Step 5: You can confirm the imported LDAP users were listed in the Users tab. Now you can log in to ezeelogin with LDAP user in ezeelogin GUI

Note: When importing an LDAP user, they will be assigned to the default group or the mapped user group. After the import, if we change the LDAP user to another user group, we will receive a note saying "Group Mismatch." This is not an error.



Note: After importing the users to Ezeelogin, log in with the user and set up the security code for the user under **Account -> Password -> New Security Code**

Step 6: Make sure that UNIX ATTRIBUTES is enabled on WINDOWS(2003,2008,2012) SERVER

Note: You do not need to install unix attributes on Windows 10 and Windows 2016 server OS.

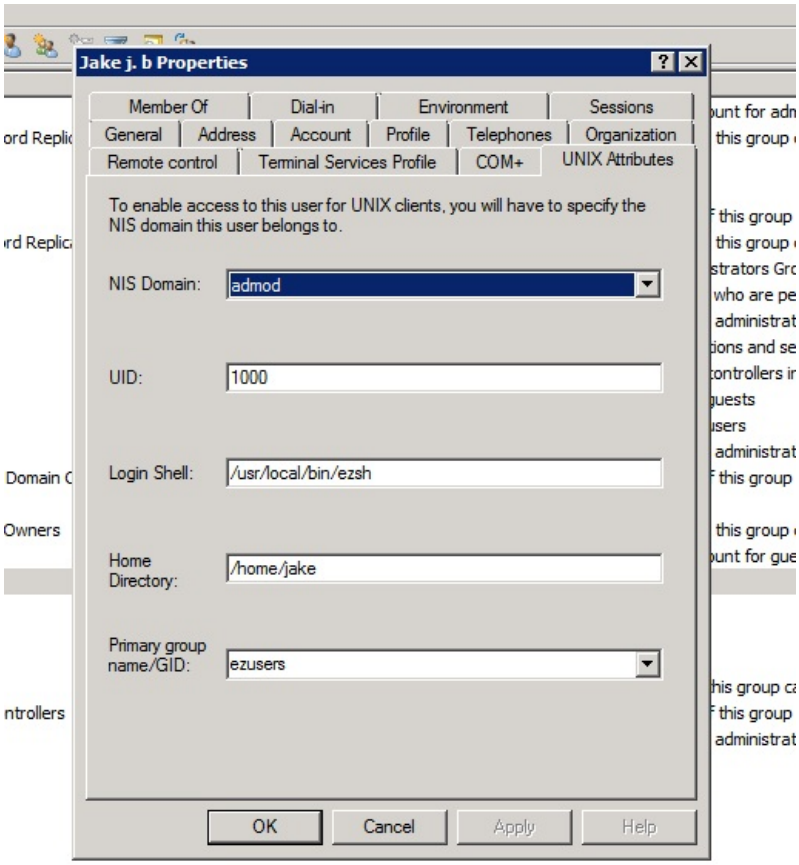
Login to the Windows server and open the Command Prompt. Enter the following command:

```
Dism.exe/online/enable-feature /feature name:nis /all
```

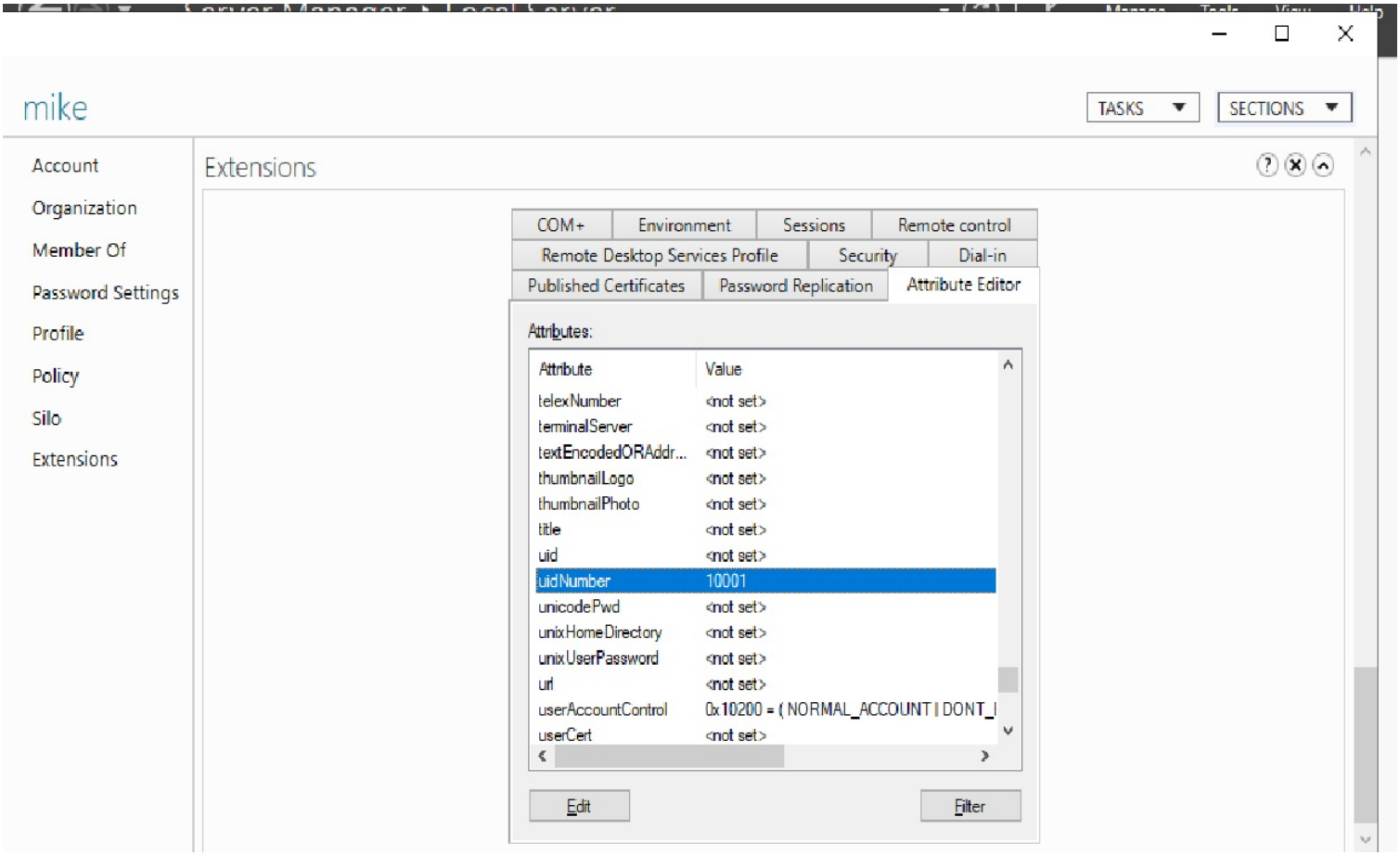
Reboot the server to complete the installation

Step 7: Make sure to add the values for UID, GID, Login Shell, Home Directory

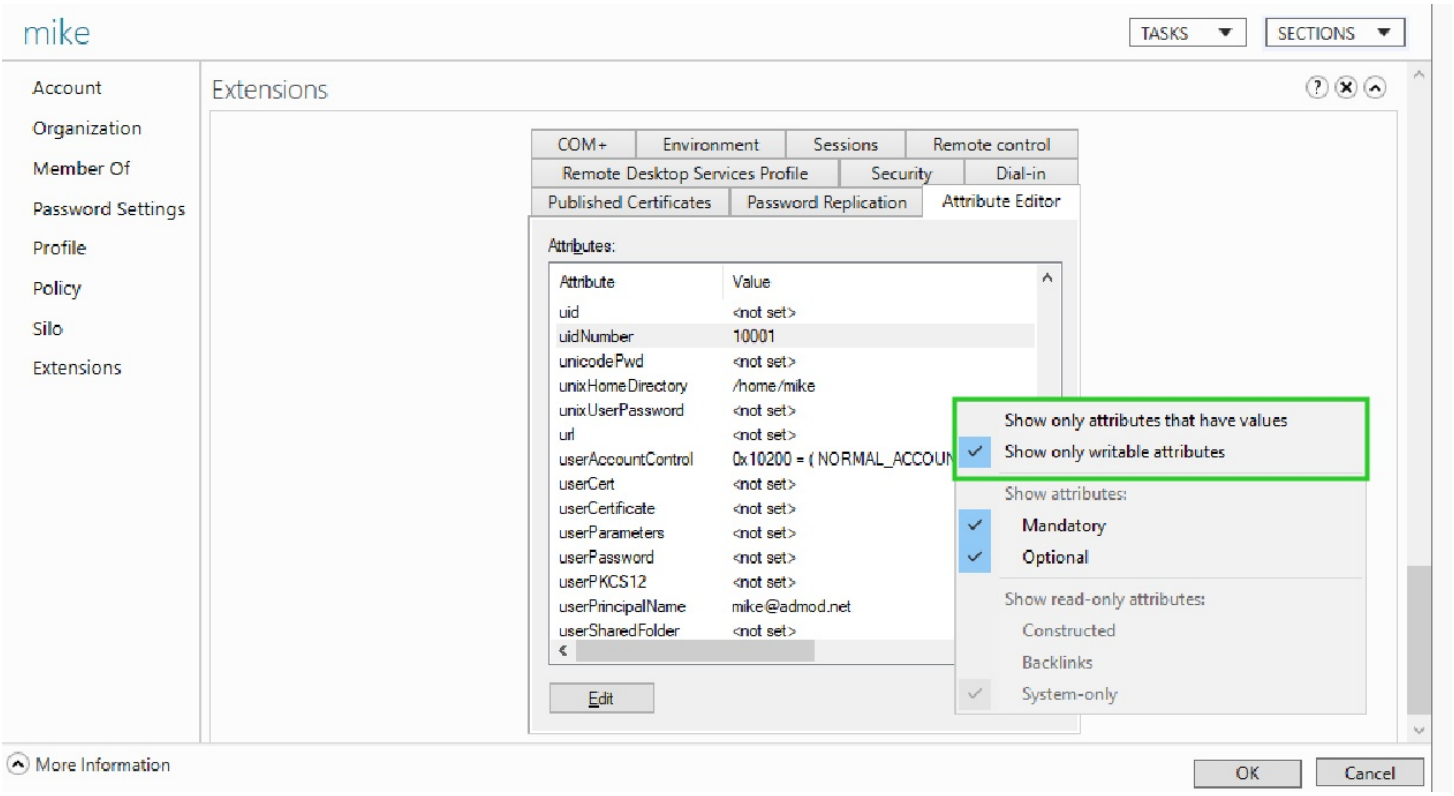
Win 2008 Unix Attributes



For Window 2016 AD user set the attributes such as **uidNumber = 10001 , gidNumber = 12001 , unixHomeDirectory = /home/mike , loginShell=/usr/local/bin/ezsh**



Note: For the Unix Attributes uidNumber, gidNumber, and login shell to be visible, make sure to click on the Filter button and select ONLY " Show Only Writable Attributes" as shown below.



Let's configure PAM_LDAP Authentication for SSH

Login to Ezeelogin SSH server to configure pam-LDAP

Step 1: Install the **pam-LDAP module** by the following command

```
root@gateway:~# apt-get install ldap-auth-client ldap-auth-config nscd
```

Step 2: Enter **LDAP URI**, **Base dn** & select **LDAP version 3**

Enter the details when it is prompted or you can add it later as follows.

Step 3: Add **Binddn**, **bind password** & Active Directory Mappings to **/etc/ldap.conf**

```
root@gateway:~# nano /etc/ldap.conf


base OU=developers,DC=adez,DC=com

uri ldap://192.168.1.15

binddn cn=admin,dc=eztest,dc=net

bindpw chaSD@#234JH56hj^7
```

Note: In Ubuntu 16.x, run the command " ln -s /etc/ldap /etc/openldap" as well.

Step 4: Search for **RF 2307 (AD) mapping** & **add** or **uncomment** the following lines

```
nss_map_objectclass posixAccount user
nss_map_objectclass shadowAccount user
nss_map_attribute uid sAMAccountName
nss_map_attribute homeDirectory unixHomeDirectory
```

```
nss_map_attribute shadowLastChange pwdLastSet
nss_map_objectclass posixGroup group
nss_map_attribute uniqueMember member
pam_login_attribute sAMAccountName
pam_filter objectclass=User
pam_password ad

nss_override_attribute_value loginShell /usr/local/bin/ezsh
```

Step 5: Append '**ldap**' to password, group & shadow in **/etc/nsswitch.conf**

```
root@gateway:~# cat /etc/nsswitch.conf

# /etc/nsswitch.conf

#

# Example configuration of GNU Name Service Switch functionality.

# If you have the `glibc-doc-reference' and `info' packages installed, try:

# `info libc "Name Service Switch"' for information about this file.


passwd:         compat  ldap

group:          compat  ldap

shadow:         compat  ldap


hosts:          files mdns4_minimal [NOTFOUND=return] dns

networks:       files


protocols:      db files

services:       db files

ethers:         db files

rpc:            db files


netgroup:       nis
```

Step 6: Enable auto-create home directory on login by adding the following to **/etc/pam.d/common-session** by the following command

```
root@gateway:~# echo "session optional pam_mkhomedir.so skel=/etc/skel umask=077"
>> /etc/pam.d/common-session
```

Step 7: Edit /etc/pam.d/common-password and add the ldap entries.

```
root@gateway:~# vi /etc/pam.d/common-password

#look for the lines starting with the password and add the line below to enable authentication via LDAP.

password [success=1 user_unknown=ignore default=die] pam_ldap.so use_authtok try_first_pass
```

Step 8: Restart nscd service

```
root@gateway:~# service nscd restart
```

Note: Ensure the login shell of LDAP user is /usr/local/bin/ezsh

Step 9: Now run the **id/finger** command and see whether you can get AD user details

```
root@gateway:~# finger jake
Login: jake Name: jake t
Directory: /home/jake Shell: /usr/local/bin/ezsh
Last login Wed Jun 13 05:02 (EDT) on pts/1 from 10.1.1.13
No mail.
No Plan.
:~# id jake
uid=10001(jake) gid=120001(domain users) groups=1547600513(domain users)
```

Note: Run an LDAP search to check the values returned from your AD server as follows. This is used for troubleshooting. Ensure that it returns the values of uid, gid, home directory, and login shell.

```
root@gateway:~# ldapsearch -x -LLL -E pr=200/noprompt -h 10.11.1.164 -D
"administrator@ad2016.admod.net" -w admod_2016 -b
"cn=jake,cn=users,dc=ad2016,dc=admod,dc=net"

dn: CN=jake,CN=Users,DC=ad2016,DC=admod,DC=net
objectClass: top
objectClass: person
objectClass: organizationalPerson
objectClass: user
cn: jake
givenName: jake
distinguishedName: CN=jake,CN=Users,DC=ad2016,DC=admod,DC=net
instanceType: 4
whenCreated: 20180703063304.0Z
whenChanged: 20180703063554.0Z
displayName: jake
uSNCreated: 45128
uSNChanged: 45136
name: jake
objectGUID:: ldpkFlnRs0O6irphlTq1AA==
userAccountControl: 512
badPwdCount: 0
```

codePage: 0

countryCode: 0

badPasswordTime: 0

lastLogoff: 0

lastLogon: 0

pwdLastSet: 131750731848783837

primaryGroupID: 513

objectSid:: AQUAAAAAAAUVAAAAmhs/bgMv2mlWATm4VQQAAA==

accountExpires: 9223372036854775807

logonCount: 0

sAMAccountName: jake

sAMAccountType: 805306368

userPrincipalName: jake@ad2016.admod.net

objectCategory: CN=Person,CN=Schema,CN=Configuration,DC=ad2016,DC=admod,DC=net

dSCorePropagationData: 16010101000000.0Z

uidNumber: 10001

gidNumber: 12000

unixHomeDirectory: /home/jake

loginShell: /usr/local/bin/ezsh

pagedresults: cookie=

Troubleshooting Steps:

ERROR: Could not authenticate with any LDAP server

ERROR: Could not bind to any LDAP server: 80090308

Error log file and configuration file to troubleshoot.

Related Articles:

How do I configure Ezeelogin to authenticate using Windows_AD(Pam-LDAP) in CentOS

Assigning user groups for LDAP users?

Can we map the existing user group in LDAP to ezeelogin as the ezeelogin user group?