Integrate Windows AD with Ubuntu using SSSD

558 Nesvin KN March 28, 2025 Tweaks & Configuration 4469

How to integrate Windows AD with Ubuntu 18/20/22 using SSSD?

Overview: This article provides a step-by-step instructions for integrating Ubuntu 18, 20, or 22 with Windows Active Directory (AD) using System Security Services Daemon (SSSD) for centralized authentication and user management.

1. Ensure the following ports on the Ubuntu host are open and accessible to the AD domain controllers:

DNS: 53 , **LDAP:** 389, **Kerberos:** 88 & 464, **LDAP Global Catalog:** 3268, **NTP:** 123 (UDP)

2. Additionally, verify that system time on both the Ubuntu host and the Windows AD domain controllers is synchronized. Kerberos authentication requires time synchronization to function correctly.

Refer article to correct server time in Centos, RHEL, Ubuntu, SUSE

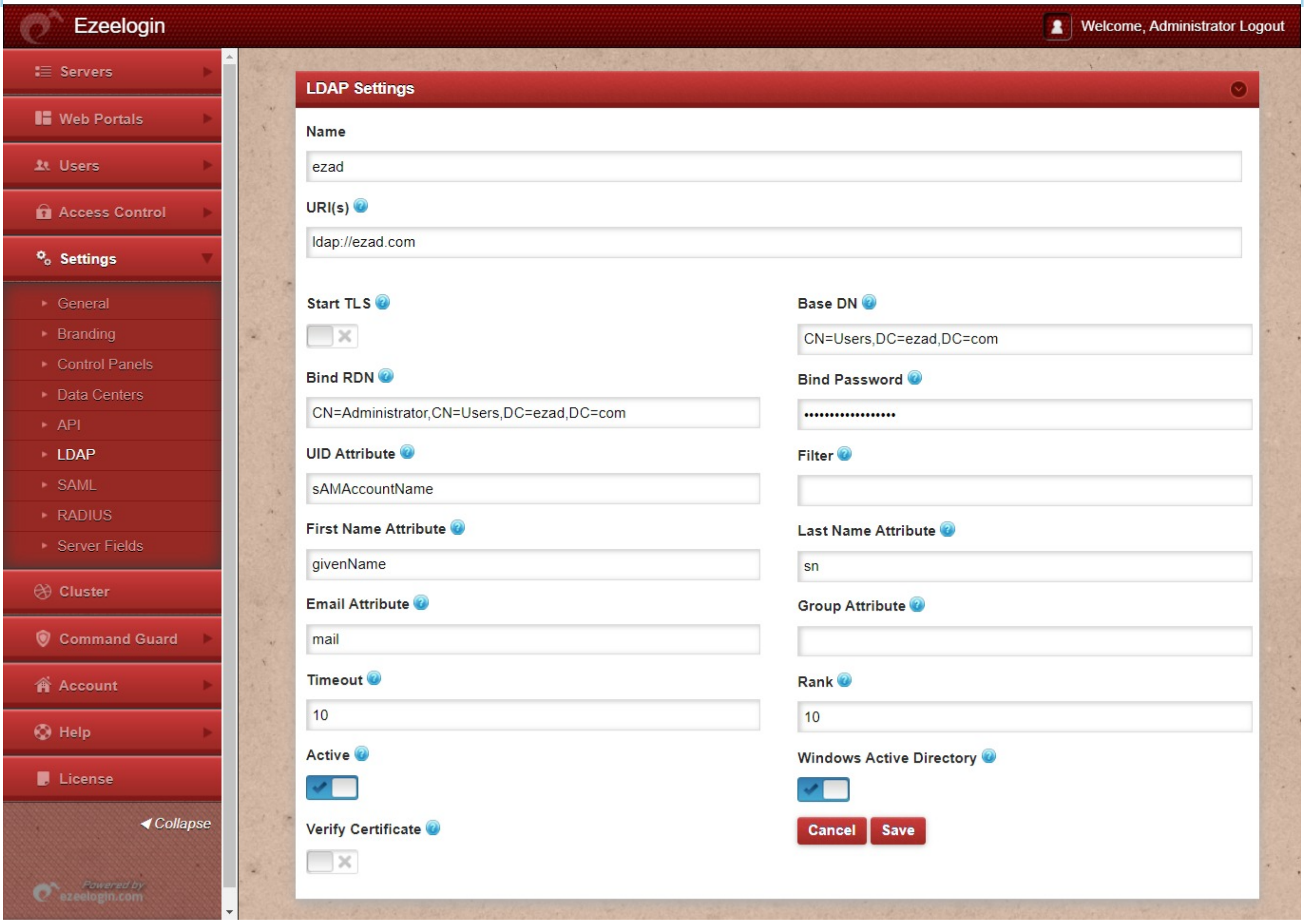
Step 1: Login to Ezeelogin Web-GUI > open settings > Ldap. Add the details of LDAP configurations.

How to find base DN and bind RDN

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.)



LDAP Settings

Name: ezad

URI(s): ldap://ezad.com

Start TLS: ☒

Base DN: CN=Users,DC=ezad,DC=com

Bind RDN: CN=Administrator,CN=Users,DC=ezad,DC=com

Bind Password: ••••••••••••••••••

UID Attribute: sAMAccountName

Filter:

First Name Attribute: givenName

Last Name Attribute: sn

Email Attribute: mail

Group Attribute:

Timeout: 10

Rank: 10

Active: ✓

Windows Active Directory: ✓

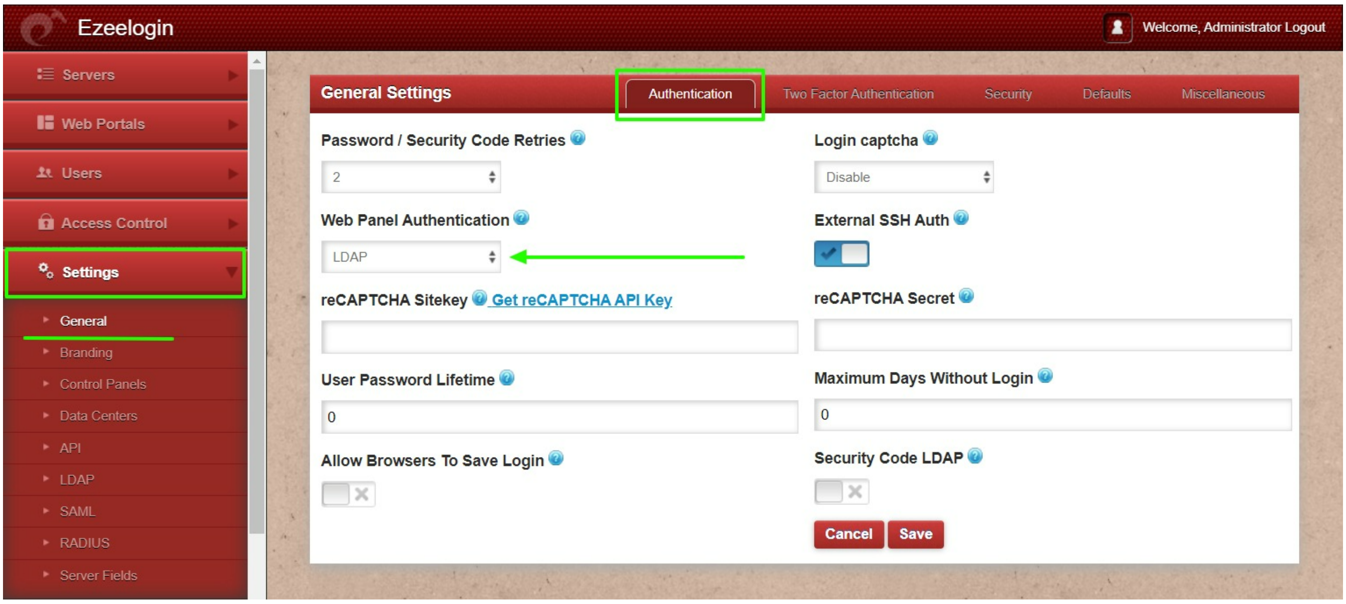
Verify Certificate: ☒

Cancel Save

Verify Certificate feature is only available from **Ezeelogin version 7.35.0**.

Refer article to upgrade Ezeelogin to the latest version.

Step 2: Go to **Settings** > **General** > **Authentication** > change **Web Panel Authentication** to **LDAP.**



General Settings

Password / Security Code Retries: 2

Login captcha: Disable

Web Panel Authentication: LDAP

External SSH Auth: ☑

reCAPTCHA Sitekey Get reCAPTCHA API Key

reCAPTCHA Secret

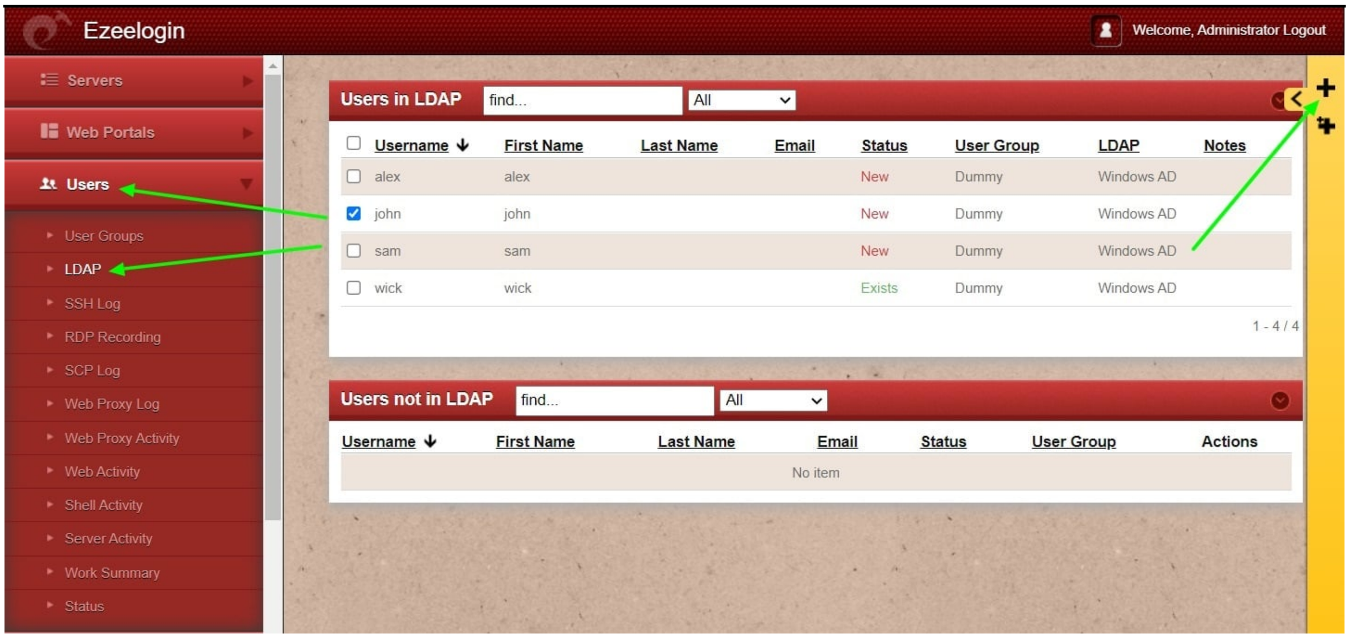
User Password Lifetime: 0

Maximum Days Without Login: 0

Allow Browsers To Save Login: ☒

Security Code LDAP: ☒

Step 3: Select the **LDAP users** and click on the button to import users into Ezeelogin.



Users in LDAP

□	Username	First Name	Last Name	Email	Status	User Group	LDAP	Notes
□	alex	alex			New	Dummy	Windows AD	
☑	john	john			New	Dummy	Windows AD	
□	sam	sam			New	Dummy	Windows AD	
□	wick	wick			Exists	Dummy	Windows AD	

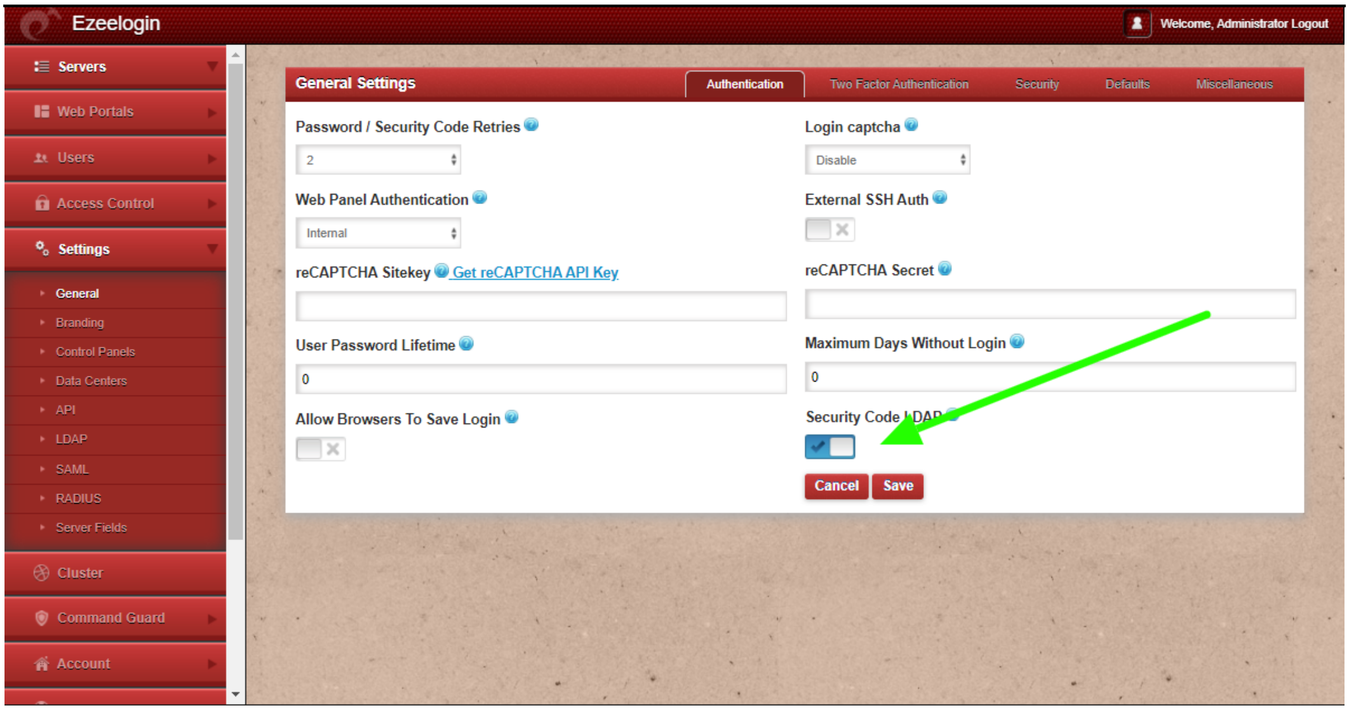
1 - 4 / 4

Users not in LDAP

Username	First Name	Last Name	Email	Status	User Group	Actions
No item						

You can confirm the imported LDAP users were listed in the Users tab in Ezeelogin GUI. You will be able to log in to Ezeelogin GUI with windows user credentials.

Step 4: Enable Security Code LDAP option from Settings > General > Authentication, if the user does not want to login to Ezeelogin GUI to set up a security code.



General Settings

Password / Security Code Retries: 2

Login captcha: Disable

Web Panel Authentication: Internal

External SSH Auth: ☒

reCAPTCHA Sitekey Get reCAPTCHA API Key

reCAPTCHA Secret

User Password Lifetime: 0

Maximum Days Without Login: 0

Allow Browsers To Save Login: ☒

Security Code LDAP: ✓

Backend configuration to integrate Windows with Ubuntu

Step 1: Install the required packages.

```
root@gateway :~# apt-get install realmd sssd oddjob oddjob-mkhomedir
adcli samba-common krb5-user nscd -y
```

Step 2: Provide Windows IP and Windows domain name in hosts file.

```
root@gateway :~# vim /etc/hosts
```

```
windows_ip  windows_domain_name
```

Step 3: Provide Windows IP in resolv.conf to resolve and discover the AD domain.

```
root@gateway ~]# vim /etc/resolv.conf

nameserver  windows_ip
```

Step 4: Check if AD domain discovery is successful. Refer below example with ldapad.com

```
root@gateway:~# realm discover ldapad.com

ldapad.com
type: kerberos
realm-name: LDAPAD.COM
domain-name: ldapad.com
configured: kerberos-member
server-software: active-directory
client-software: sssd
required-package: sssd-tools
required-package: sssd
required-package: libnss-sss
required-package: libpam-sss
required-package: adcli
required-package: samba-common-bin
login-formats: %U
login-policy: allow-realm-logins
```

Step 5: Join Ubuntu in the Active Directory domain. Replace Administrator with Windows admin account.

```
root@gateway :~# realm join ldapad.com -U Administrator

Password for Administrator:
```

Step 6: Confirm joining successfully with the realm list. Refer below example.

```
root@gateway :~# realm list

ldapad.com
type: kerberos
realm-name: LDAPAD.COM
```

```
domain-name: ldapad.com
configured: kerberos-member
server-software: active-directory
client-software: sssd
required-package: sssd-tools
required-package: sssd
required-package: libnss-sss
required-package: libpam-sss
required-package: adcli
required-package: samba-common-bin
login-formats: %U
login-policy: allow-realm-logins
```

Step 7: After successful joining you will get below sssd.conf and you need to change use_fully_qualified_names to False and shell to ezsh.

```
root@gateway :~# vim /etc/sssd/sssd.conf

[sssd]
domains = ldapad.com
config_file_version = 2
services = nss, pam

[domain/ldapad.com]
ad_domain = ldapad.com
krb5_realm = LDAPAD.COM
realmd_tags = manages-system joined-with-adcli
cache_credentials = True
id_provider = ad
krb5_store_password_if_offline = True
default_shell = /bin/bash
ldap_id_mapping = True
use_fully_qualified_names = False
fallback_homedir = /home/%u@%d
access_provider = ad

override_shell = /usr/local/bin/ezsh
```

Step 8: Enable autocreate 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 9: Restart sssd and nscd using the below commands.

```
root@gateway :~# systemctl restart sssd nscd
```

Step 10: Run id username /getent passwd username and see AD user details.

```
root@gateway :~# id john
uid=1701601108(john) gid=1701600513(domain users) groups=1701600513(domain users)

root@gateway :~# getent passwd john
john:*:1701601108:1701600513:john user:/home/john@ldapad.com:/usr/local/bin/ezsh
```

Use the below command to clear the cache of the user.

```
root@gateway :~# sss_cache -u username
```

Related Articles:

[Integrate Windows AD with RHEL 8 using SSSD]

[Integrate OpenLdap with Centos 8 using SSSD]

[Integrate Windows AD with CentOS using SSSD]

Online URL:
https://www.ezeelogin.com/kb/article/integrate-windows-ad-with-ubuntu-using-sssd-558.html