

## **Clearlogin - Windows Active Directory**

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# Overview

This article has the steps to connect Clearlogin to a Windows Active Directory domain controller (DC), and to configure delegated permissions for password changes and account unlocks.



The steps in this article require you to expose an Active Directory domain controller to the Internet. If you are syncing your local Windows AD to Azure AD you should consider connecting [Clearlogin to Azure AD](#) instead.



## Identity Source Priorities

A primary use case for identity source priorities is **having multiple connections to the same directory**.

For example, you can configure Clearlogin with **2 identity sources (2 domain controllers) that are members of the same Active Directory forest**. Just make the higher priority identity source a connection to your primary domain controller, and the lower priority identity source a connection to your secondary domain controller. This way Clearlogin has the ability to authenticate your users when the primary domain controller is not available.

# Prerequisites

The following prerequisites need to be met before Clearlogin can be configured to connect to an Active Directory domain controller:

- For Clearlogin to be able to change a user account password, or reset an account's lockout status, it needs to connect to a writable domain controller. If Clearlogin will not be performing any of those tasks, it can connect to a read-only domain controller.
- The domain controller that Clearlogin connects to must have an SSL certificate to encrypt the communication between the domain controller and Clearlogin (LDAPS). The type of SSL cert can be any of the following:
  - A public cert generated by a certificate authority (CA) like GoDaddy (highly recommended).
  - A cert generated by your internal PKI environment like Active Directory Certificate Services (ADCS) (recommended).
  - A self-signed cert generated for the domain controller (Not recommended. Consider this as a last resort).
  - **Note:** Wildcard certs are supported.
- The domain controller needs to have a public IP address, and TCP Port 636 (LDAPS) open to receive connections from the Clearlogin public IP addresses:
  - 54.209.59.53
  - 54.84.156.93
  - 52.26.70.174
  - 54.210.149.165
  - 54.187.95.53
  - 54.187.96.193
- Create a service account in Active Directory for Clearlogin to use when querying user account properties and to verify a user account's password.
- Document the service account's DN (Distinguished Name) & Password



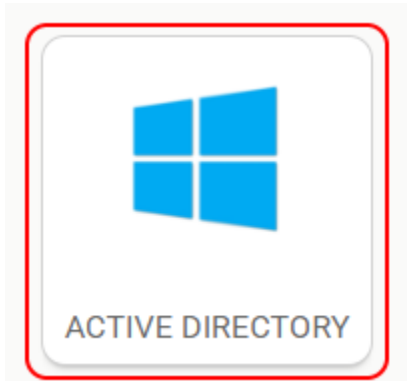
To get the service account's DN, do the following:

- Open Active Directory Users and Computers (ADUC)
- Make sure **View** (menu) > **Advanced Features** is selected. If not, select it.
- Open the **properties** of the Clearlogin service account and choose the **Attribute Editor** tab.
- Look for the **distinguishedName** attribute, and **double-click it to view its value**.
- **Copy the value** to the clipboard, and save it in a text file for later use.
- Click **Cancel** to get out of that window, and close the properties of the Clearlogin service account.

You can also use this PowerShell command: `Get-ADUser <SAMAAccountName>`

# Connect Clearlogin to a Domain Controller

- Sign into the **Clearlogin Admin Console**: <https://admin.clearlogin.com>
- In the left navigation bar, browse to: **Identity Sources**
- Click on **New Identity Source**, and select **Active Directory**




In the **AD configuration** page, fill in the following fields:

<b>Display Name</b>	EXAMPLES <ul style="list-style-type: none"><li>• Active Directory</li><li>• Active Directory - Primary</li><li>• Company Name AD</li></ul>
<b>User Domain</b>	EXAMPLES <ul style="list-style-type: none"><li>• company.local</li><li>• internal.local</li><li>• us.internal.local</li><li>• company.com</li><li>• company.net</li></ul>
<b>Access Tag</b>	< leave blank >
<b>Priority</b>	When you have multiple identity sources, this number tells Clearlogin which identity source to query first when a user signs in. If two or more identity sources have the same priority number, Clearlogin will query the identity source with the oldest creation date first and the newest creation date last.  1 (highest priority) - 10 (lowest priority)
<b>Timeout</b>	The amount of time Clearlogin will wait for a response from the identity source.  10 seconds (default)
<b>Hostname</b>	The FQDN or Public IP of your domain controller.
<b>TCP Port</b>	<ul style="list-style-type: none"><li>• 636 (LDAPS) (Recommended)</li><li>• 389 (LDAP)</li><li>• Do not use the global catalog TCP ports</li></ul>
<b>Encryption Type</b>	<ul style="list-style-type: none"><li>• If using TCP port 636, use <b>Simple TLS</b> (Recommended)</li><li>• If using TCP port 389, use <b>Start TLS</b> or you can set this to <b>None</b> (passwords are transmitted in clear text)</li></ul>

<b>Search Filter</b>	<p>Determines the Active Directory attribute Clearlogin will use when searching for user accounts. You can only have 1 search filter.</p> <p>EXAMPLES</p> <ul style="list-style-type: none"> <li>• (samAccountName={username})</li> <li>• (userPrincipalName={username}@domain.com)</li> <li>• (email={username}@domain.com)</li> <li>• (uid={username})</li> </ul>
<b>Search Base (for User Accounts)</b>	<p>Defines the location in Active Directory where Clearlogin starts its search for user accounts. The location must be defined as a DN (Distinguished Name). You can only have 1 search base.</p> <p>EXAMPLES</p> <ul style="list-style-type: none"> <li>• DC=domain,DC=com</li> <li>• CN=Users,DC=domain,DC=com</li> <li>• OU=Users,OU=Resources,DC=domain,DC=com</li> </ul>
<b>Bind DN (Service Account DN)</b>	<p>This is the DN (Distinguished Name) of the Clearlogin service account.</p> <p>EXAMPLES</p> <ul style="list-style-type: none"> <li>• CN=Clear Login,CN=Users,DC=domain,DC=com</li> <li>• CN=Clear Login,OU=Service Accounts,OU=Resources,DC=domain,DC=com</li> </ul>
<b>Bind Password</b>	<p>This is the password for the Clearlogin service account.</p>
<b>Password Modification Operation</b>	<p>If password change/reset is enabled in <b>Security &gt; Passwords</b>, this will tell Clearlogin how to perform password modifications.</p> <p>Reset   Change</p>
<b>Failover Protection Destination</b>	<p>This allows you to use Clearlogin's native directory as a backup for your AD user accounts. If you have an AD environment with multiple domain controllers and are also syncing your AD to Azure AD, you probably don't need to enable this feature.</p>
<b>Remove FQDN from Username</b>	<p>You can have Clearlogin remove the domain portion of a User Principal Name (UPN) or Email Address when a user signs in.</p> <p>For example, "user@domain.com" becomes "user".</p>

Click **Update Active Directory Identity Source** to save the configuration.

 **Update Active Directory Identity Source**

## Test Connectivity

You can test the configuration with the test box at the bottom of the AD Identity Source edit page.

- **Test Username:** The samAccount name of a known user account.
- **Test Password:** The password of the Clearlogin service account.

Test Username

This is the username that will be used when testing a good connection on your public status page if enabled.

Test Password

This is the password that will be used when testing a good connection on your public status page if enabled.



Enabled?

▶ Test Connection

🔑 Update Active Directory Identity Source

## AD Delegation for Password Changes & Unlocks

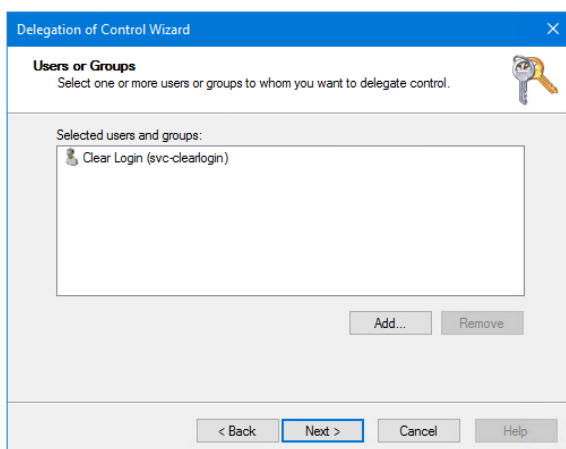
For Clearlogin to be able to change a user's password, or unlock a user account, you need to delegate permissions to the Clearlogin Active Directory bind/service account. You would only perform these steps to give Clearlogin the permissions to change a user's account password, or unlock a user's account.

### Delegation Requirements

- Domain Admin permissions to set up the delegation
- The Clearlogin AD bind/service account
- The Organizational Unit (OU) that contains the user accounts that Clearlogin will manage

### Steps to Configure Delegated Permissions

- Open **Active Directory Users and Computers**
- **Right-Click** the Organizational Unit (OU) that contains the user accounts that Clearlogin will manage, and choose **Delegate Control...**
- **Add** the Clearlogin bind/service account, and click **Next**



- Select **Create a custom task to delegate**, and click **Next**

**Delegation of Control Wizard**

**Tasks to Delegate**  
You can select common tasks or customize your own.

☐ Delegate the following common tasks:

- ☐ Create, delete, and manage user accounts
- ☐ Reset user passwords and force password change at next logon
- ☐ Read all user information
- ☐ Create, delete and manage groups
- ☐ Modify the membership of a group
- ☐ Manage Group Policy links
- ☐ Generate Resultant Set of Policy (Planning)

☒ Create a custom task to delegate

< Back   **Next >**   Cancel   Help

- Select **Only the following objects in the folder**
- From the list, scroll down and select **User objects**
- Click **Next**

**Delegation of Control Wizard**

**Active Directory Object Type**  
Indicate the scope of the task you want to delegate.

Delegate control of:

☐ This folder, existing objects in this folder, and creation of new objects in this folder

☒ Only the following objects in the folder:

- ☐ Site Settings objects
- ☐ Sites Container objects
- ☐ Subnet objects
- ☐ Subnets Container objects
- ☐ Trusted Domain objects
- ☒ User objects

☐ Create selected objects in this folder

☐ Delete selected objects in this folder

< Back   **Next >**   Cancel   Help

- Select **General**
- Scroll down and select **Change Password & Reset Password**

**Delegation of Control Wizard**

**Permissions**  
Select the permissions you want to delegate.

Show these permissions:

☒ General

☐ Property-specific

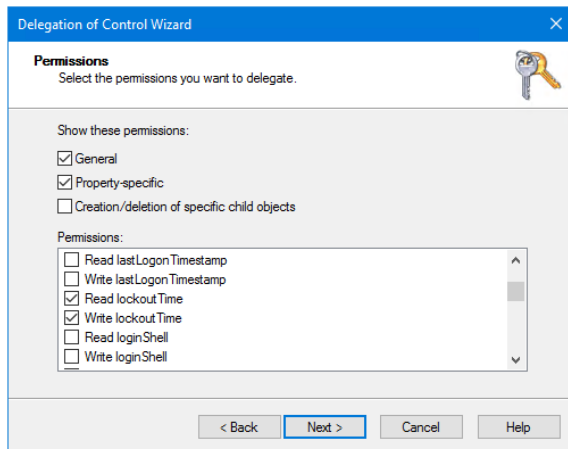
☐ Creation/deletion of specific child objects

Permissions:

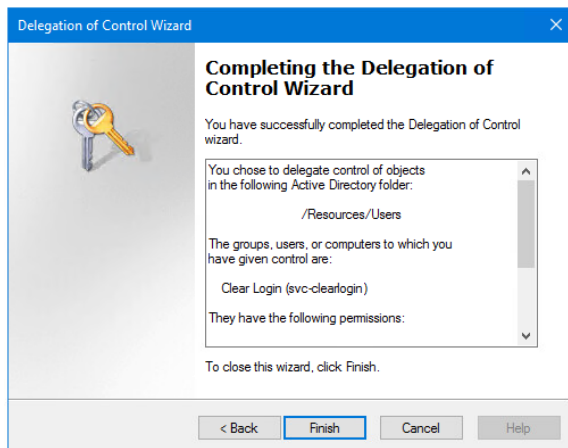
- ☐ Read All Properties
- ☐ Write All Properties
- ☒ Change password
- ☒ Reset password
- ☐ Send as
- ☐ Receive as

< Back   **Next >**   Cancel   Help

- Select **Property-specific**
- Scroll down and select **Read lockoutTime & Write lockoutTime**
- Click **Next**



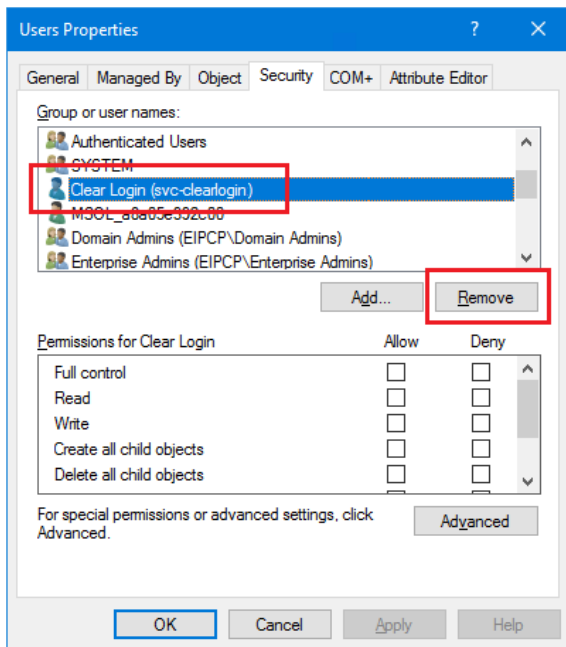
- Review and click **Finish**



## Remove Delegated Permissions

- Open **Active Directory Users and Computers**
- **Right-Click** the Organizational Unit (OU) that contains the user accounts that Clearlogin manages, and choose **Properties**
- Select the **Security** tab
- **Select** the Clearlogin bind/service account
- Click the **Remove** button
- Click **OK**






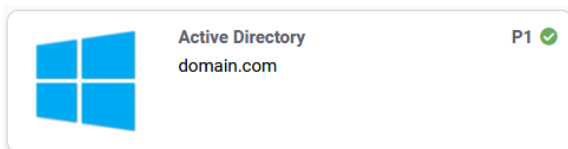
## Clearlogin Password Changes, Resets, & Lockouts

Depending on your requirements and how you have configured delegated permissions in AD, you may need to modify Clearlogin's Password & Lockout settings. To do so, follow the steps in the [Password and Lockout Settings](#) article.

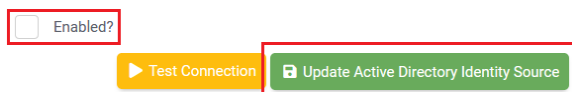
## Remove Active Directory from Clearlogin

 You cannot recover from this process. When you delete this configuration, it cannot be restored.

- Log into the **Admin Portal**: <https://admin.clearlogin.com>
- In the left navigation bar, browse to: **Identity Sources**
- Click on the instance of Active Directory in your list of identity sources.



- Scroll to the bottom of the **Summary** page, and click **Edit**
- Scroll to the bottom of the **Edit** page, deselect **Enabled**, and click the **Update** button to save your changes.





You cannot recover from this process. When you delete this configuration, it cannot be restored.

- To delete the configuration, scroll to the bottom of the **Summary** page, and click **Delete**.
- **The configuration is deleted immediately.** You will **NOT** receive a warning.



Delete