

# MachPanel KeyCloak SSO Authentication

## Summary

This article provides you information about how to configure MachPanel KeyCloak SSO Authentication in MachPanel.

## Applies to

Applies to MachPanel v7.2.11 and above.

## KeyCloak Single-Sign On Overview

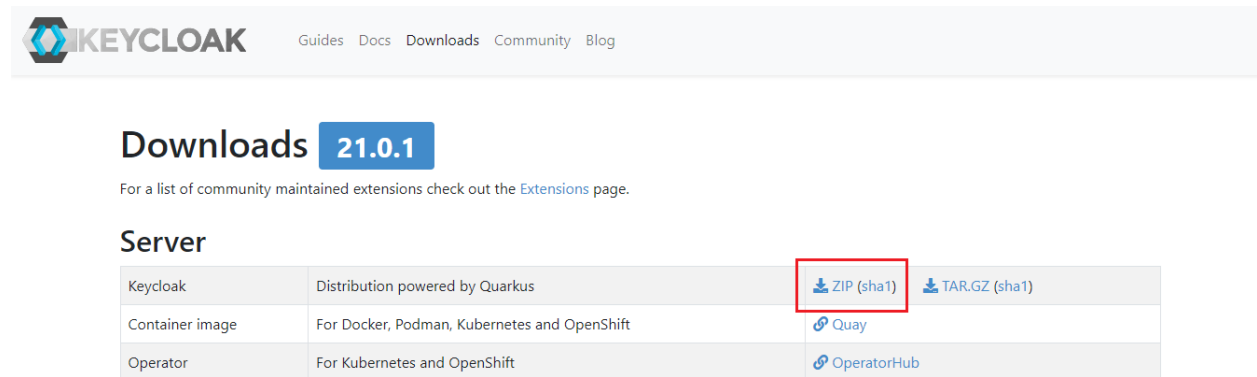
KeyCloak is an Open Source Identity and Access Management. It is used to Add authentication to applications and secure services with minimum effort.

Users authenticate with KeyCloak rather than individual applications. This means that your applications don't have to deal with login forms, authenticating users, and storing users. Once logged-in to KeyCloak, users don't have to login again to access a different application. This also applied to logout. KeyCloak provides single-sign out, which means users only have to logout once to be logged-out of all applications that use KeyCloak.

## Integrating KeyCloak SSO with MachPanel

## Step 1:

- Download [KeyCloak](#)



**KEYCLOAK** [Guides](#) [Docs](#) [Downloads](#) [Community](#) [Blog](#)

## Downloads 21.0.1

For a list of community maintained extensions check out the [Extensions](#) page.

### Server

Keycloak	Distribution powered by Quarkus	<a href="#">ZIP (sha1)</a>	<a href="#">TAR.GZ (sha1)</a>
Container image	For Docker, Podman, Kubernetes and OpenShift	<a href="#">Quay</a>	
Operator	For Kubernetes and OpenShift	<a href="#">OperatorHub</a>	

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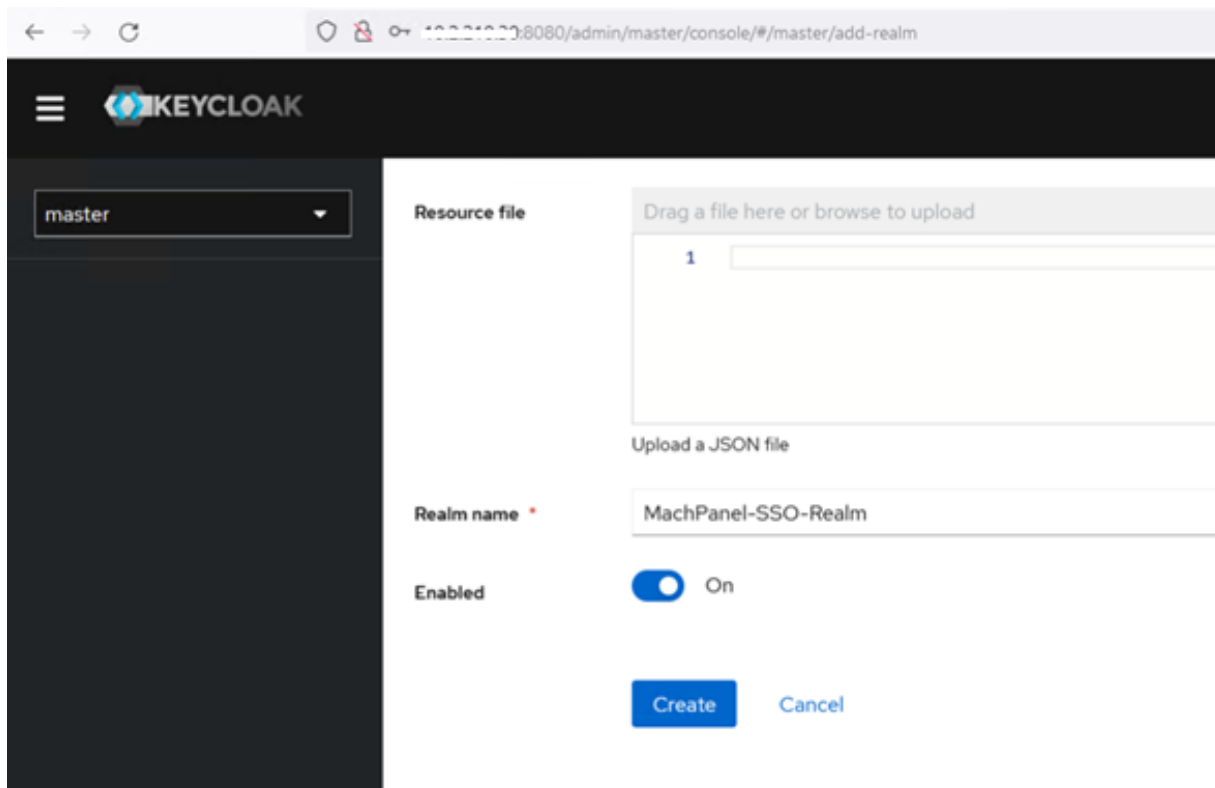
- Unzip the Package.
- Open CMD and navigate to BIN folder inside the directory containing the unzipped package.
- Execute: **kc.bat start-dev**

```
c:\keycloak-20.0.2\bin>kc.bat start-dev
```

- Browse **https://<IP.of.KeyCloak.Machine>:8080** (Replace "<IP.of.KeyCloak.Machine>" with the IP of KeyCloak Server.
- Create Admin user for Master Realm. Like:
  - o Username: Admin
  - o Password: Admin
- Login via Admin User.

### Step 2: (If you already have Realm available then Skip this step and move to Next Step)

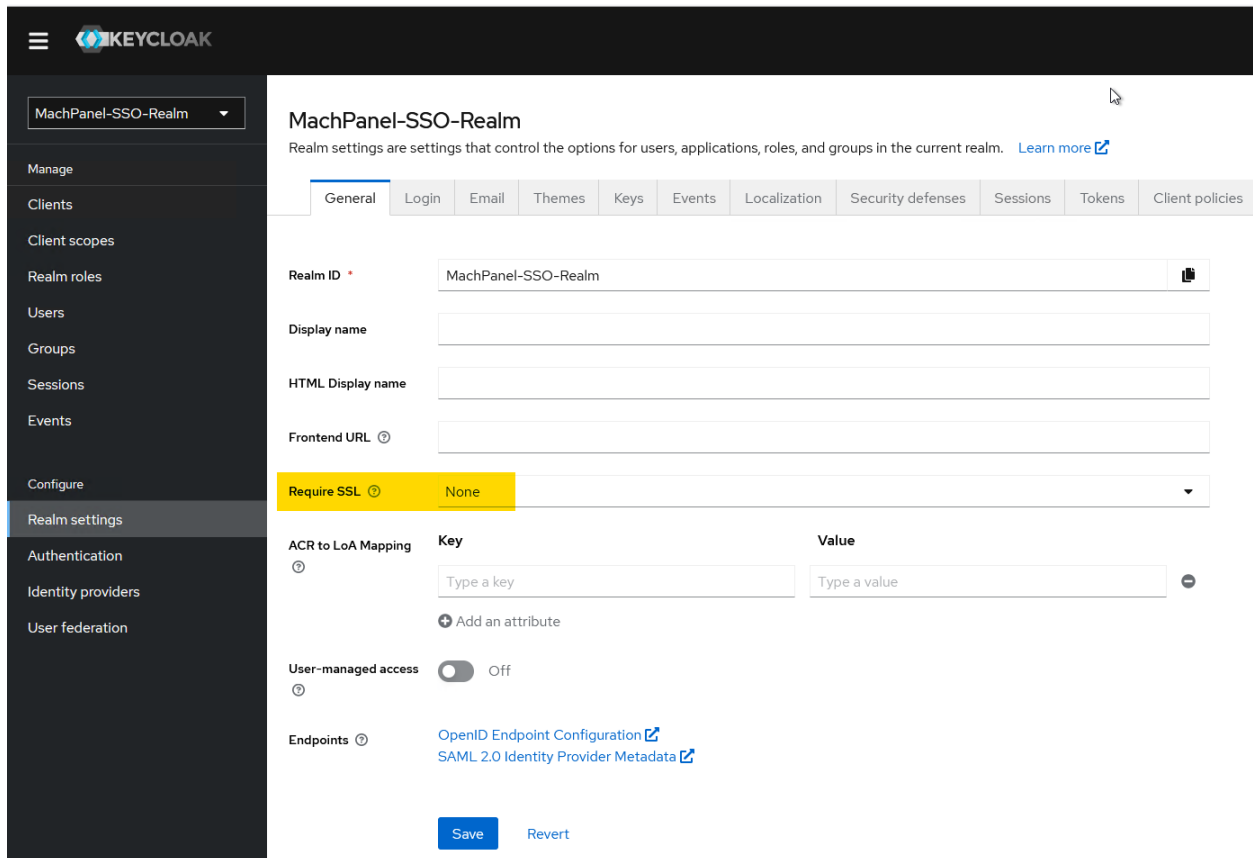
- Always create New Realm. **Do not use Master Realm**



The screenshot shows the Keycloak Admin Console interface. The browser address bar displays the URL: `https://192.168.1.10:8080/admin/master/console/#/master/add-realm`. The page title is "KEYCLOAK". On the left sidebar, a dropdown menu shows "master". The main content area is titled "Resource file" and contains a file upload area with the text "Drag a file here or browse to upload". Below this is a table with one row containing the number "1". Underneath the table is the text "Upload a JSON file". The "Realm name" field is labeled with a red asterisk and contains the text "MachPanel-SSO-Realm". The "Enabled" field has a toggle switch that is currently turned "On". At the bottom of the form are two buttons: "Create" and "Cancel".

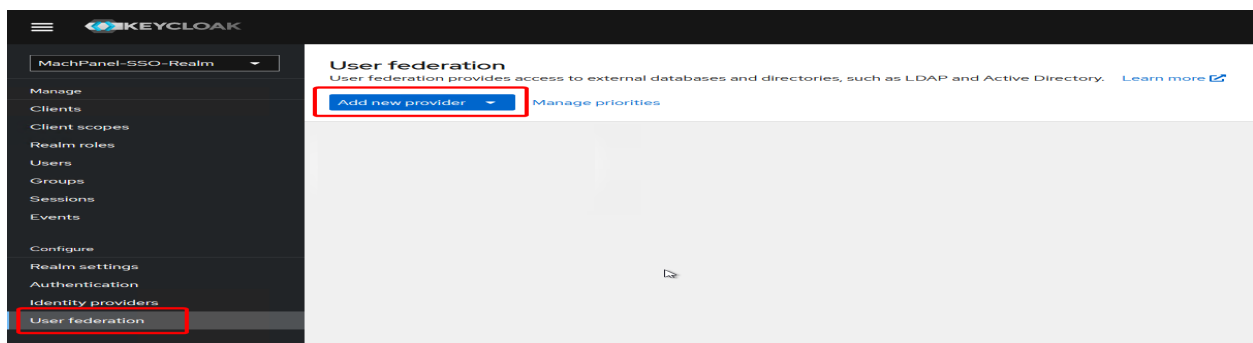
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After creation go to Realm Settings and set "Require SSL" to "None".



## Step 3: Configure "User Federation" (If you already have Federation Configured then Skip this step and move to Next Step)

- Navigate to "User Federation" and click on "Add new Provider" button:



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Configure as follows:

Set "Console display name" and select "Vendor" as "Active Directory" from drop down:

The screenshot shows the LDAP configuration interface. At the top, there are two tabs: 'Settings' (active) and 'Mappers'. Below the tabs is the 'General options' section. It contains two fields: 'Console display name' with a value of 'ldap' and a help icon, and 'Vendor' with a value of 'Active Directory' and a help icon.

Set "Connection URL" as LDAP://<AD Server IP>:

The screenshot shows the 'Connection and authentication settings' section. It includes several fields and controls: 'Connection URL' set to 'LDAP://10.1.210.111', 'Enable StartTLS' toggle set to 'Off', 'Use Truststore SPI' dropdown set to 'Only for Idaps', and 'Connection pooling' toggle set to 'Off'. There is also a 'Connection timeout' field which is empty. At the bottom of this section is a 'Test connection' button.

Set "Bind Type" as "Simple".

Set "Bind DN" by copying "Distinguished Name" of your "Administrator" account.



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Set "Password" of the Administrator account.

Bind type * ?	simple
Bind DN * ?	CN=Administrator,CN=Users,DC=ess2019,DC=local
Bind credentials * ?	●●●●●●●●
<a href="#">Test authentication</a>	

Configure LDAP Settings for searching and updating users from AD to Realm as follows:

"Users DN" = Distinguished Name of OU from where the users have to be searched / updated.

"Username LDAP Attribute" = Attribute that needs to be used for login authentication. Set "userPrincipalName" here.

Set other parameters as follows:

<b>LDAP searching and updating</b>	
Edit mode * ?	READ_ONLY
Users DN * ?	DC=ess2019,DC=local
Username LDAP attribute * ?	userPrincipalName
RDN LDAP attribute * ?	userPrincipalName
UUID LDAP attribute * ?	objectGUID
User object classes * ?	person, organizationalPerson, user
User LDAP filter ?	
Search scope ?	Subtree
Read timeout ?	
Pagination ?	<input type="checkbox"/> Off

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Set "Synchronization Settings", "Kerberos Integration" and "Advanced settings" as shown below and finally hit "Save" button:

## Synchronization settings

Import users [?](#)  On

Sync Registrations [?](#)  On

Batch size [?](#)

Periodic full sync [?](#)  On

Full sync period [?](#)

Periodic changed users sync [?](#)  On

Changed users sync period [?](#)

## Kerberos integration

Allow Kerberos authentication [?](#)  Off

Use Kerberos for password authentication [?](#)  Off

## Cache settings

Cache policy [?](#)

## Advanced settings

Enable the LDAPv3 password modify extended operation [?](#)  Off

Validate password policy [?](#)  Off

Trust email [?](#)  Off

[Query Supported Extensions](#)

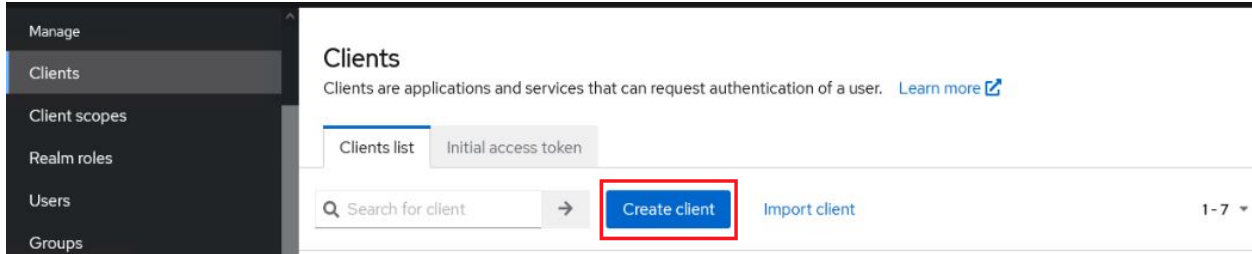
Save

Cancel

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## Step 4: Create and Configure Client:

Navigate to "Clients" under Newly configured Realm and click on "Create Client" button:



Configure as follows (replace **https://supportpanel.machsol.com** with **https://<yourpanel.yourdomain.com>** where applies):

**General Settings**

Client ID \* ⓘ MP-Test

Name ⓘ MP-Test

Description ⓘ

Always display in console ⓘ  On

**Access settings**

Root URL ⓘ

Home URL ⓘ https://supportpanel.machsol.com

Valid redirect URIs ⓘ https://supportpanel.machsol.com/\*

Valid post logout redirect URIs ⓘ https://supportpanel.machsol.com

Web origins ⓘ https://supportpanel.machsol.com

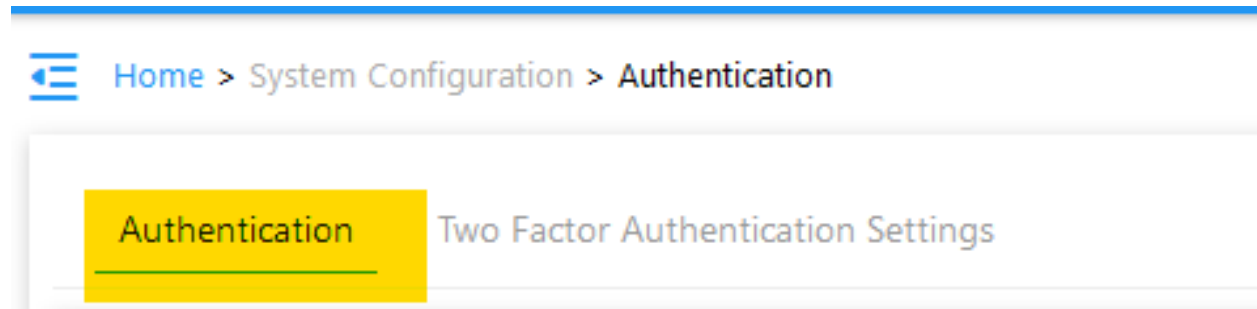
Admin URL ⓘ



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## Step 5 (Configure MachPanel to work with KeyCloak):

- Configure following in MachPanel, Navigate to **Home > System Configuration > Authentication** being logged in as Provider in MachPanel:



Scroll down to enable "KeyCloak SSO" and enter the required details:

Make sure the "Issuer Endpoint" URL is accessible from MachPanel Control Panel server.

Its up to you to enable or disable the "Auto-Redirect to KeyCloak Login" and "Signout from KeyCloak on panel Signout" options.

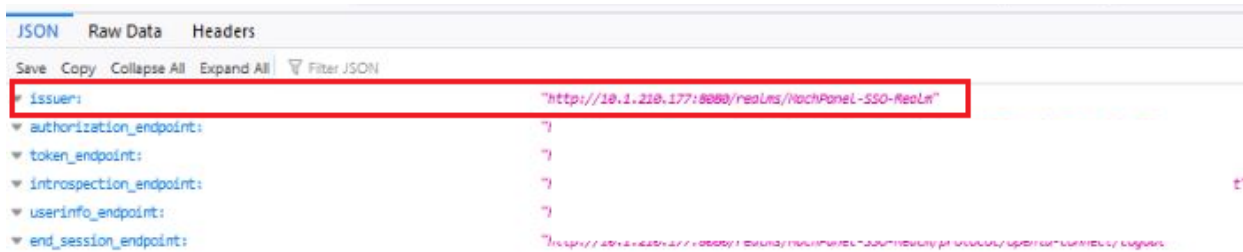
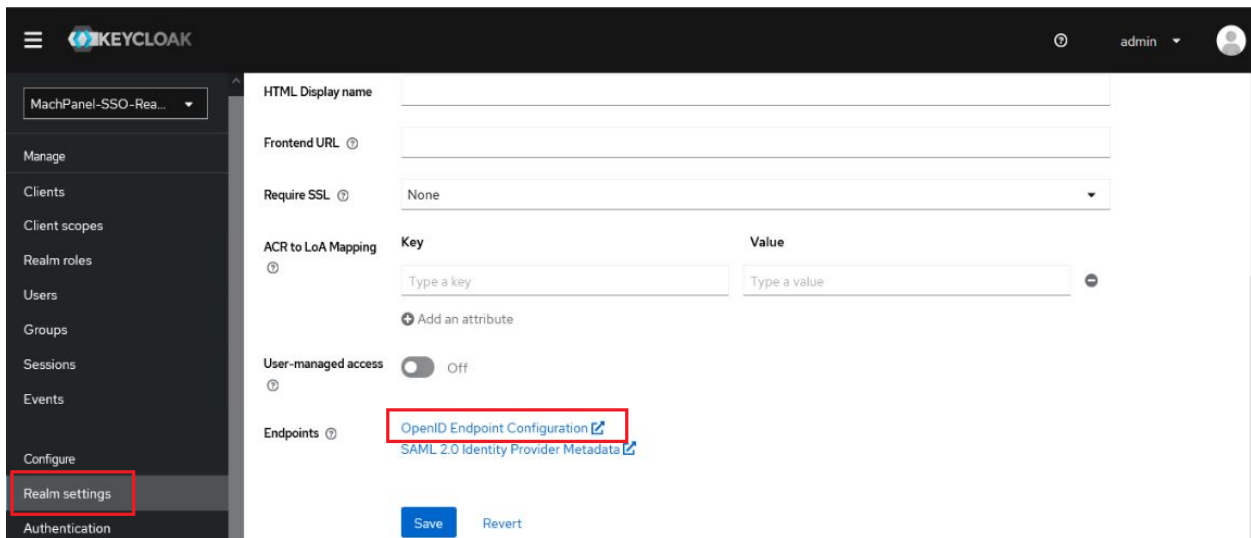
A screenshot of the 'KeyCloak SSO' configuration form in MachPanel. The form contains the following fields and options:

- \* Enable:
- \* Issuer Endpoint:
- \* Client Id:
- \* Secret:
- \* Auto-Redirect to KeyCloak Login:
- \* Signout from KeyCloak on panel signout:
- \* Comma separated IPs to not use KeyCloak:

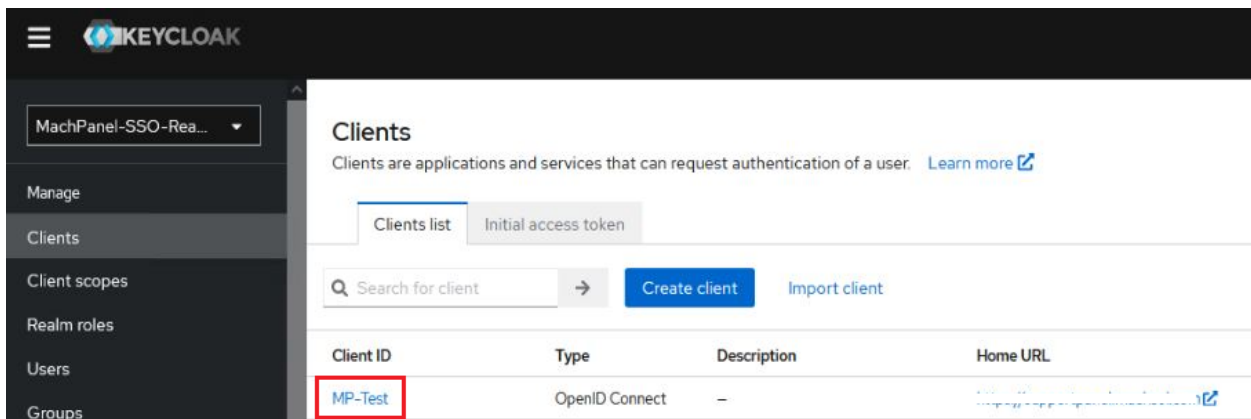
At the bottom left of the form, there is a blue button labeled 'Save Settings'.

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You can get "Issuer Endpoint" from following interface in "KayCloak":

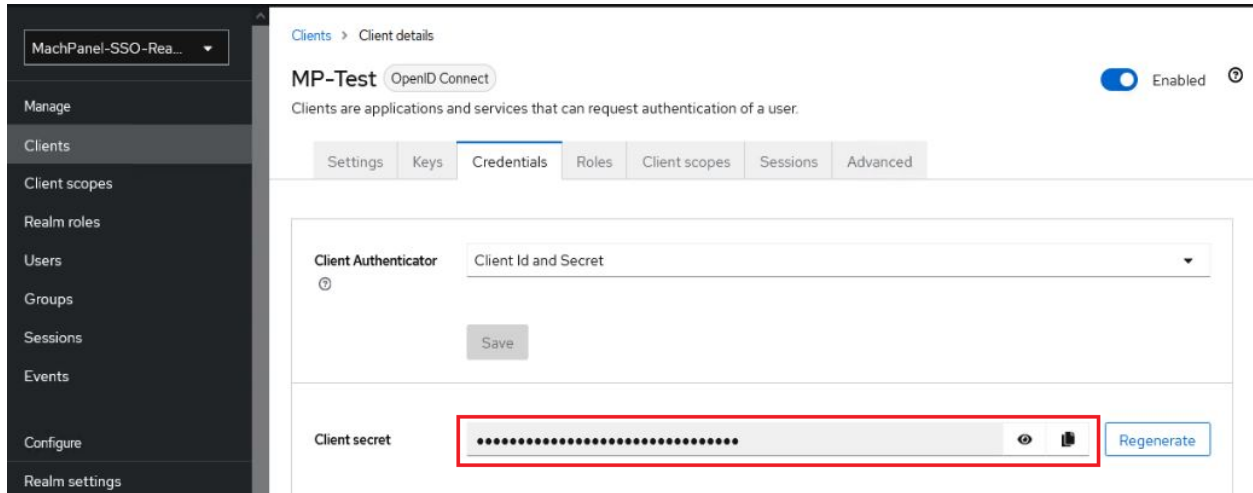


You can get "Client Id" from following interface in KeyCloak:



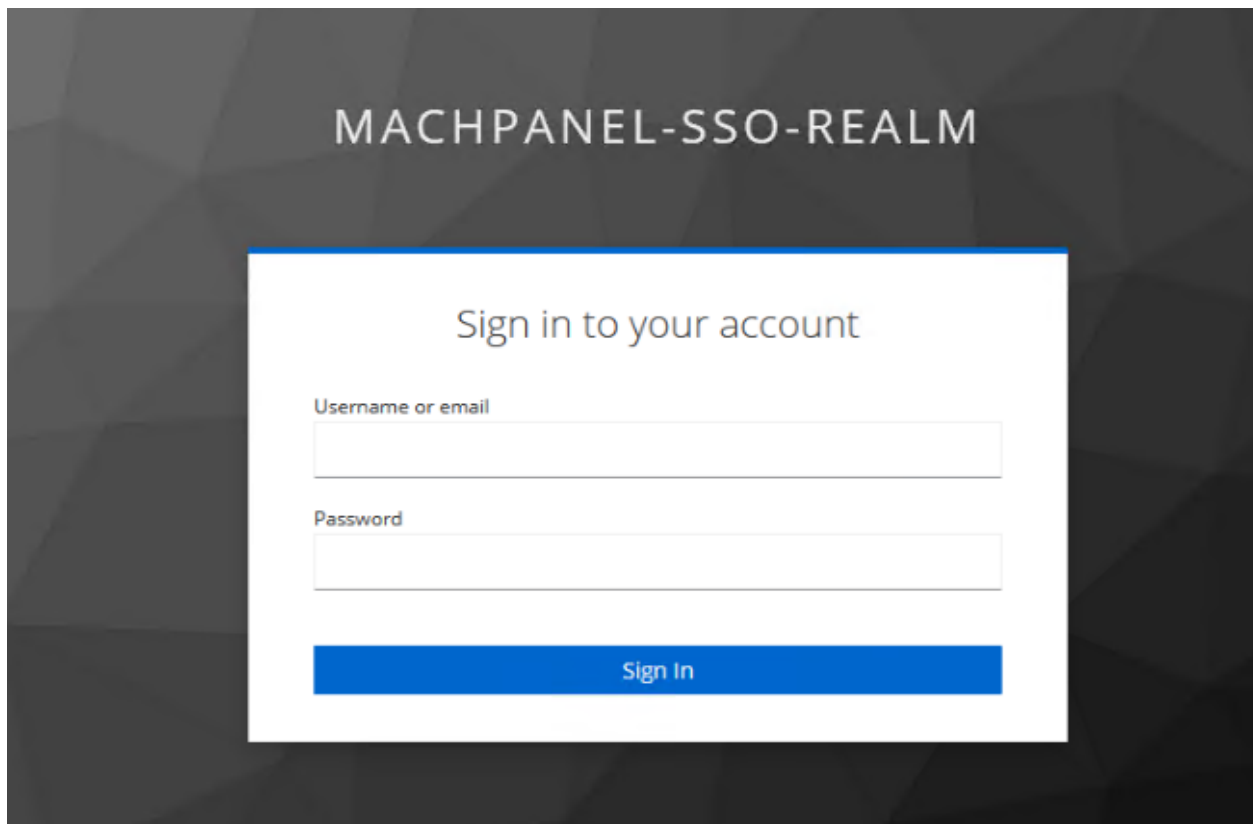
Lastly, you can get "Client Secret" by clicking on "Client ID" and then going to "Credentials" tab:

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After setting all the values in MachPanel, hit save and your panel will start redirecting to KeyCloak Login Page for authentication.

- After that when you try to login to your panel you will be redirected to KeyCoak Sign showing the Machpanel SSO Realm Name in title:



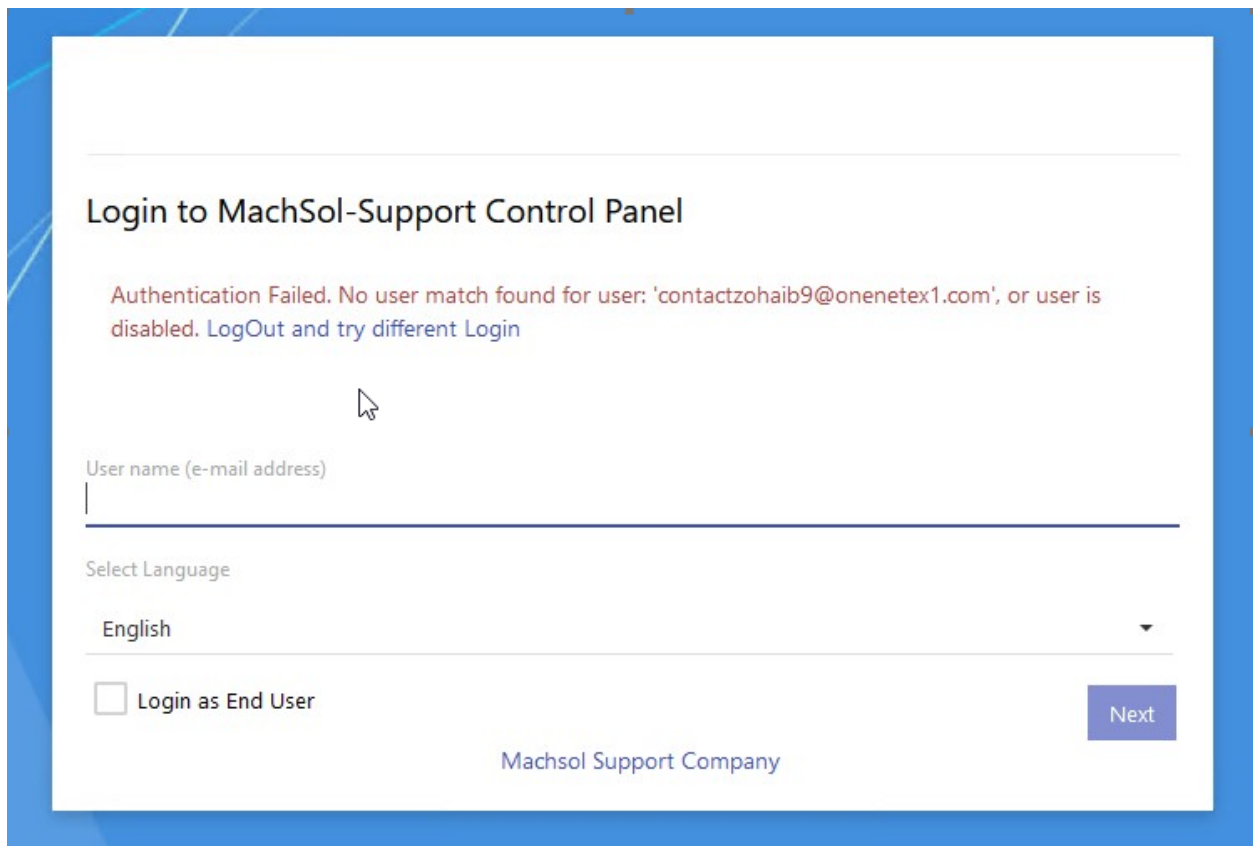
## Step 6: Lastly you must associate AD Accounts with Staff and/or Customer Accounts and Contacts:

**Before Login, ensure that you associate your Provider/Provider Staff, Reseller/Reseller Staff, Customer and Customer Contacts with appropriate AD Accounts in MachPanel.**

You can do that by following the details on KB link below:

<https://kb.machsol.com/Knowledgebase/55606/Authenticate-Active-Directory-user-Staff-Customer-and-Co>

If you login to KeyCloak via a user that exists in AD and is able to authenticate, but its not associated with any staff/customer/contact in MachPanel, then you will get an error as follows:



The screenshot shows a login page for the MachSol Support Control Panel. The page title is "Login to MachSol-Support Control Panel". Below the title, there is an error message in red text: "Authentication Failed. No user match found for user: 'contactzohaib9@onenetex1.com', or user is disabled. LogOut and try different Login". Below the error message, there is a mouse cursor pointing to the text. The login form includes a text input field for "User name (e-mail address)", a "Select Language" dropdown menu currently set to "English", and a checkbox labeled "Login as End User". A blue "Next" button is located at the bottom right of the form. At the bottom center of the page, it says "Machsol Support Company".

## MachPanel KeyCloak SSO Authentication

Clicking on the link will log you out of KeyCloak and allow you to login again using a correct user.

If there is ever any issue and you want to update configuration of MachPanel but cannot login due to issue with KeyCloak configuration, you can login to MachPanel directly 'bypassing SSO' by using **"http://localhost:786"** directly on the control panel server (the default URL for MachPanel).

MachPanel Knowledgebase

<https://kb.machsol.com/Knowledgebase/55740/MachPanel-KeyCloak-SSO-Authentic...>