SSPR & PASSWORD WRITEBACK CONFIGURATION GUIDE

Professional Introduction

The cover page introduces the guide with a clear title and subtitle outlining secure password management.

Hybrid Identity Diagram

Visual diagram illustrates user devices interacting with cloud and on-premises directories for password reset and writeback.

Core Network Components

The layout includes key components like Entra Sync Server, Active Directory Domain Controller, and DHCP-configured user PCs.

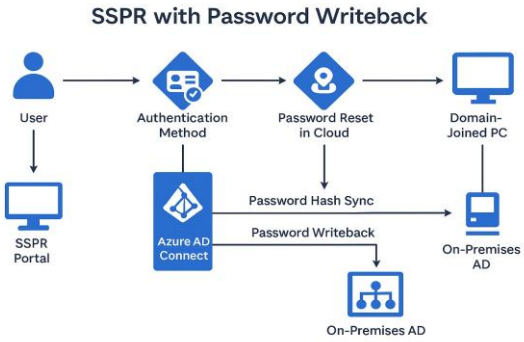
Synchronization Process

Synchronization between Entra Sync Server and Active Directory enables password writeback and secure user authentication.

User Integration Example

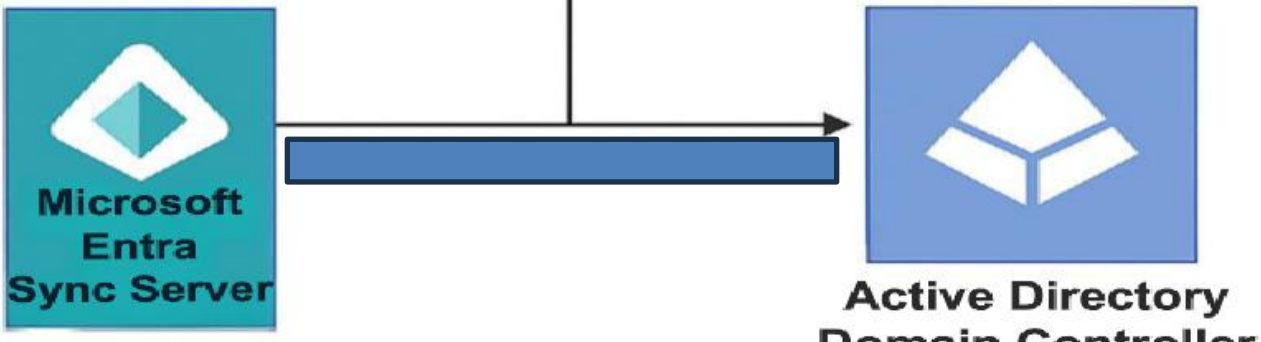
PC2, used by a real user, demonstrates practical application of the hybrid identity network setup.

Hybrid Identity Setup - labor



DHCP Clients
Michael Brown

Michael Brown-pc2.laborhub.store



Microsoft Entra Sync Server

Active Directory Domain Controller

192.168.6.10/24

❑ Project Overview

This project demonstrates the configuration of Self-Service Password Reset (SSPR) using Microsoft Entra ID with password writeback to on-premises Active Directory. It enables users to securely reset their own passwords while ensuring changes are synchronized across cloud and on-prem environments, reducing helpdesk workload and improving user experience.

SSPR Feature Overview

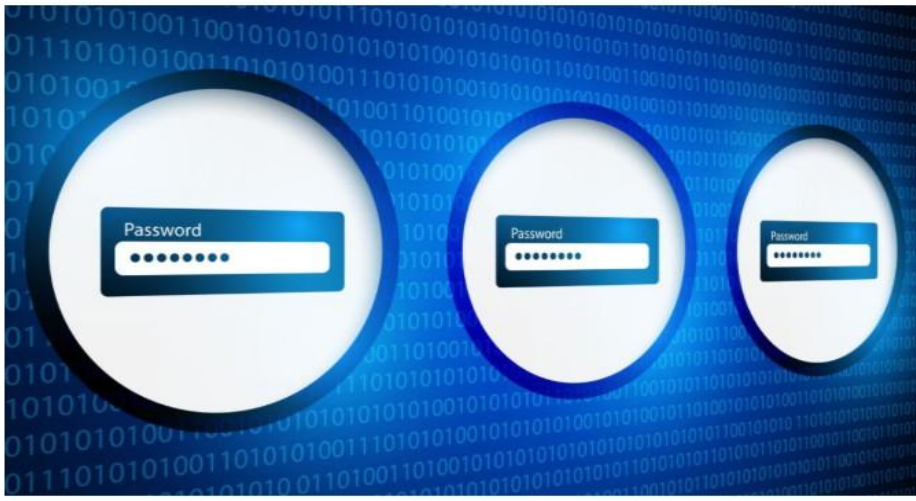
SSPR enables users to reset passwords independently, reducing IT support workload and improving user experience.

Hybrid Identity Integration

Configuring password writeback integrates cloud SSPR with on-premises Active Directory for hybrid identity management.

Security and Testing

The project focuses on enhancing security by setting authentication methods and validating configurations through testing.



❑ Technologies Used

Cloud Identity Management

Microsoft Entra ID enables cloud-based identity management for secure user authentication and access control.

Directory Synchronization

Microsoft Entra Connect synchronizes identity data between cloud and on-premises Active Directory environments.

Authentication Methods

Authentication methods like Microsoft Authenticator and SMS verification enhance security during password resets.

Hybrid Identity Features

Features such as password hash synchronization and password writeback ensure secure and seamless password management.

❑ Enabling SSPR and Authentication Methods

Enable SSPR Settings

Administrators enable SSPR by accessing password reset settings in the admin center for users or groups.

Configure Authentication Methods

Select authentication options like authenticator app, SMS, or email for secure identity verification.

Define Method Requirements

Set the number of required verification methods, typically one or two, based on security needs.

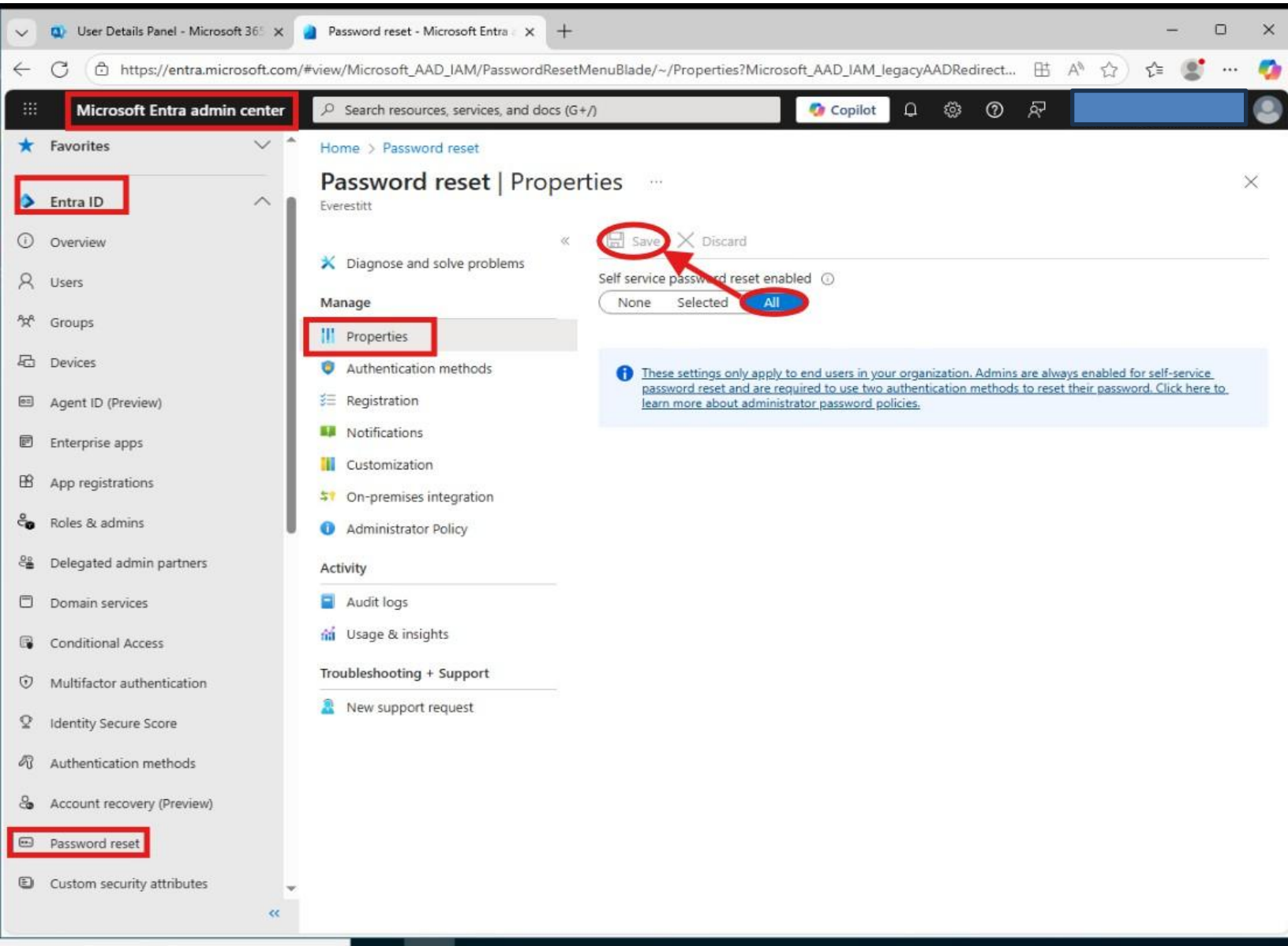
Apply Configuration Changes

Save settings to apply SSPR and authentication policies across the organization effectively.

❖ Sign in to Microsoft Entra Admin Center

- Go to: https://entra.microsoft.com
- Log in with your admin credentials.

- Navigate to Microsoft Entra ID
- On the left-hand menu, click Entra ID (under Favorites or main navigation).
- Go to Password Reset Settings
- Scroll down the left menu and click Password reset.
- Open Properties
- Under Manage, select Properties.
- Enable SSPR for All Users
- Save Changes



❖ Navigation Path

From the left menu:

➢ Password reset → Authentication methods

This section controls how users verify their identity when resetting passwords.

➢ Number of Methods Required to Reset

This means users need only one authentication method to reset their password.

If you select 2, users must complete two verification steps (more secure).

➢ Methods Available to Users

Currently, Security questions is shown but not checked.

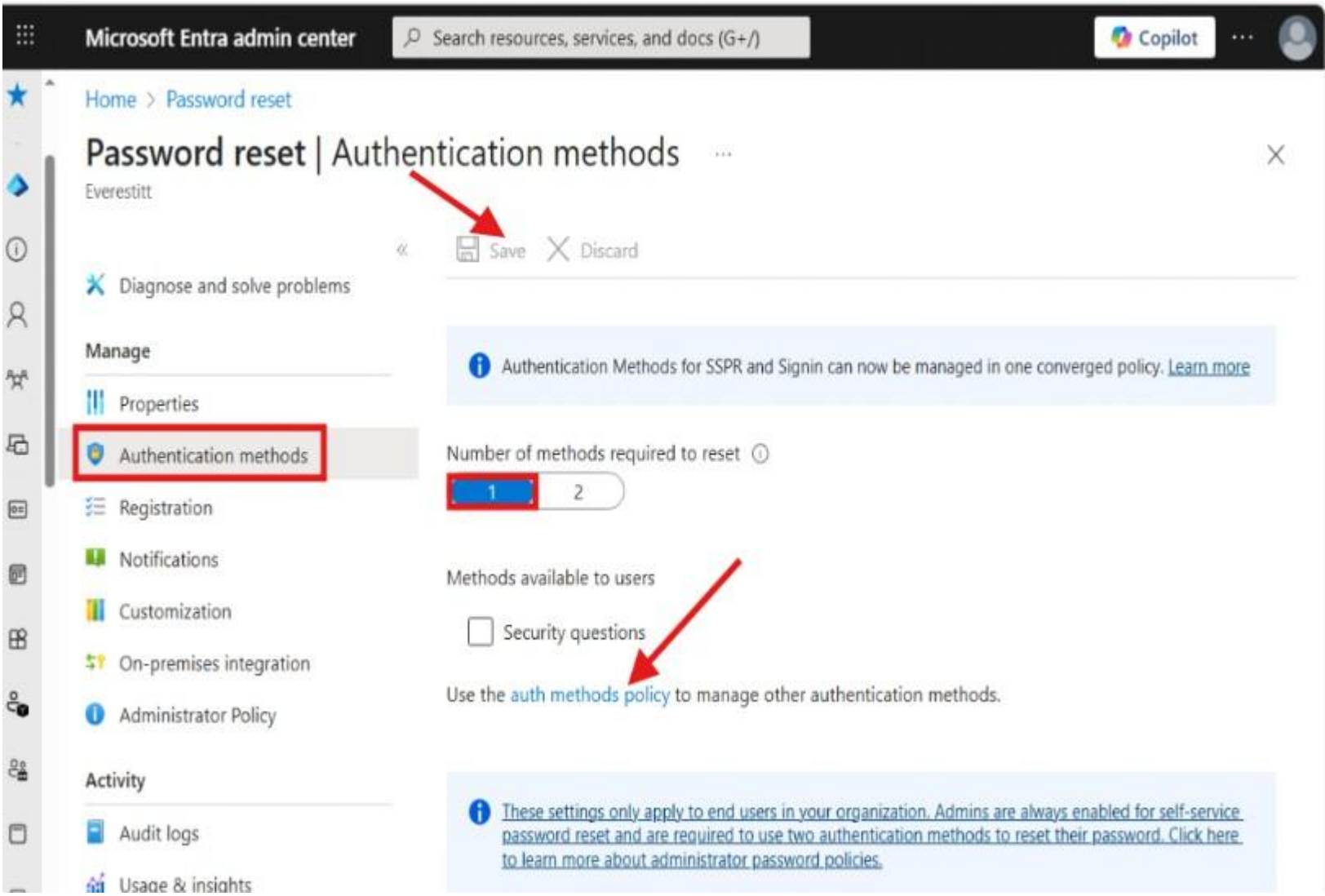
You can enable this if you want users to answer security questions as a verification method.

➢ Auth Methods Policy Link

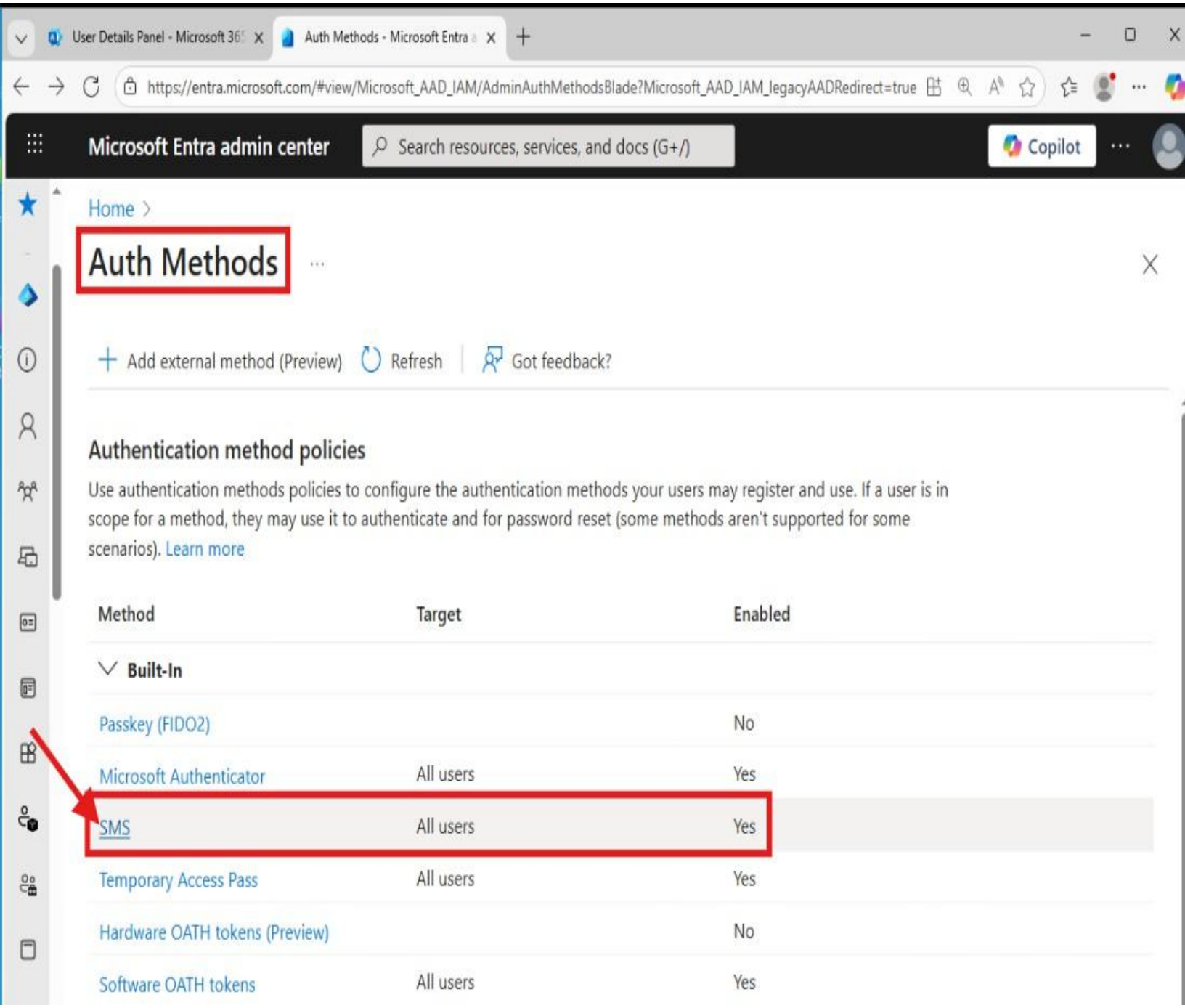
The blue link auth methods policy lets you manage other authentication methods (like phone, email, Microsoft Authenticator).

➢ Save Changes

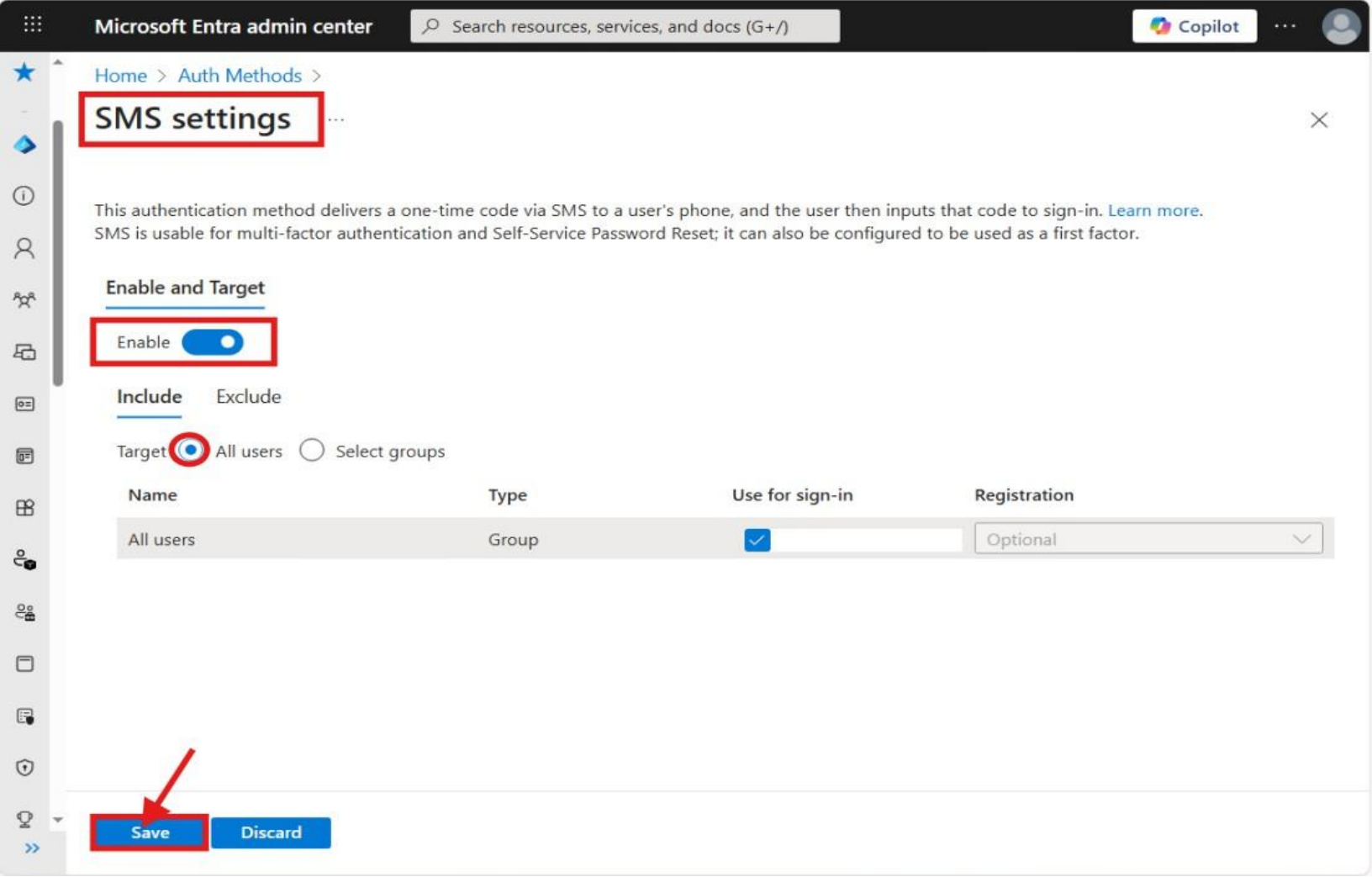
After making changes, click Save at the top.



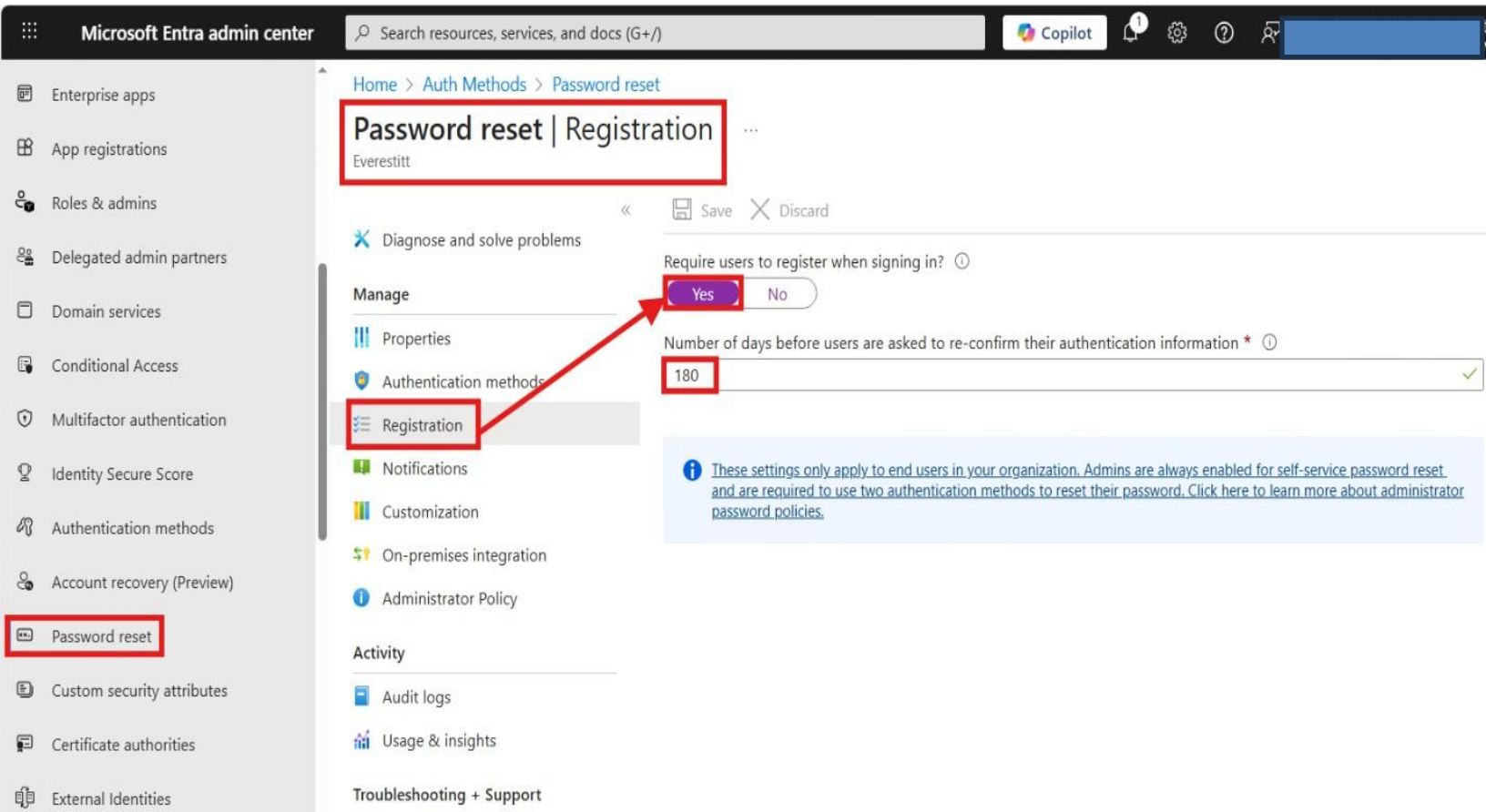
❖ Enabling methods like Microsoft Authenticator and SMS ensures users have secure options for verification during password reset or sign-in.



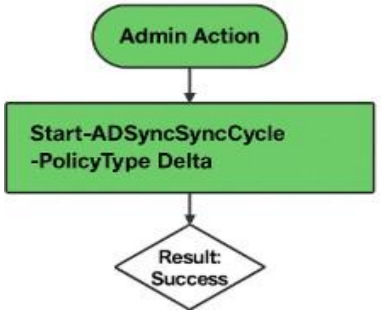
❖ It enables SMS as an authentication method for all users and saves the configuration so they can receive one-time codes for sign-in or password reset.

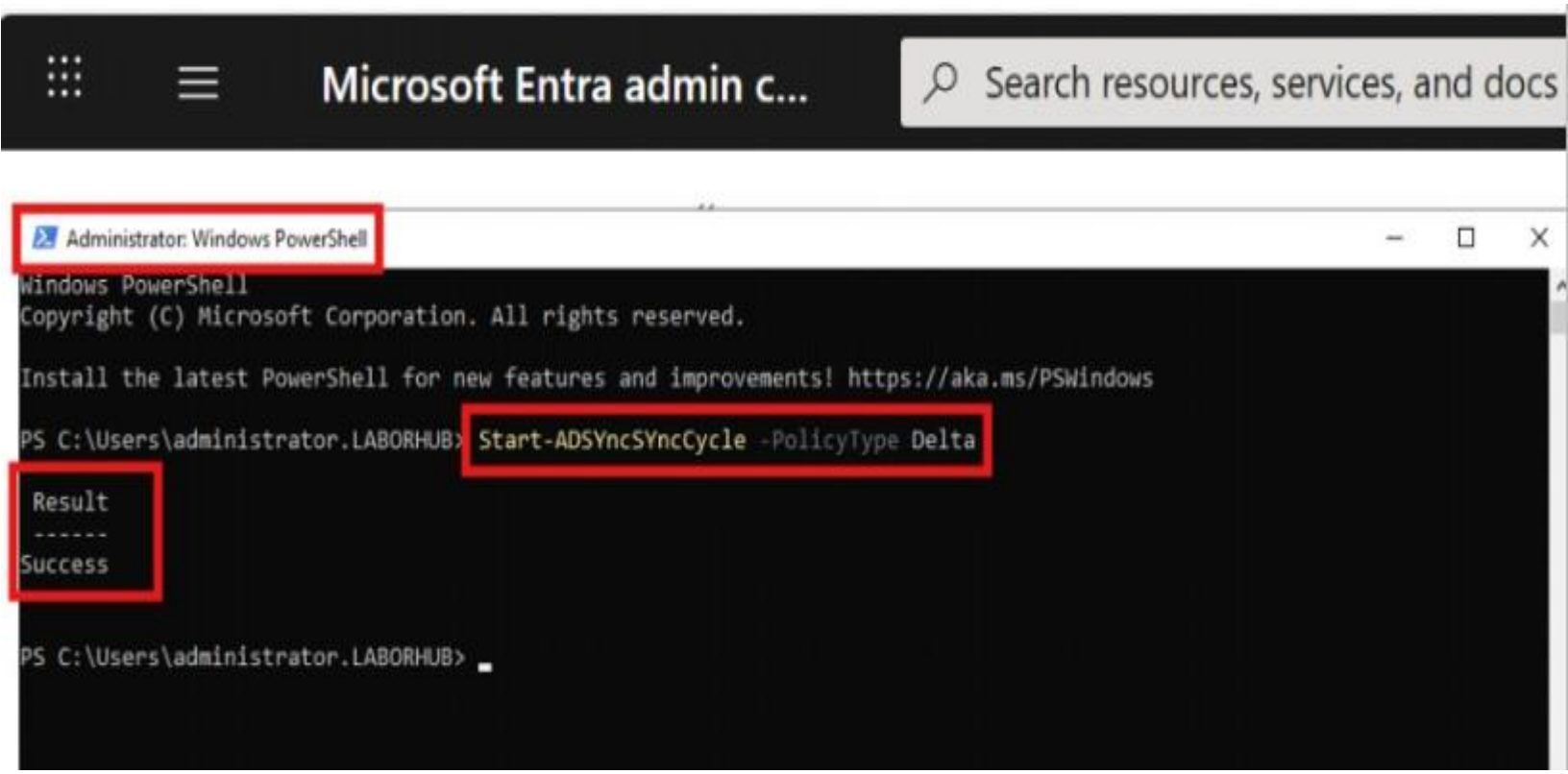


❖ Users are required to register for password reset when signing in (set to Yes), and they must re-confirm their authentication information every 180 days.



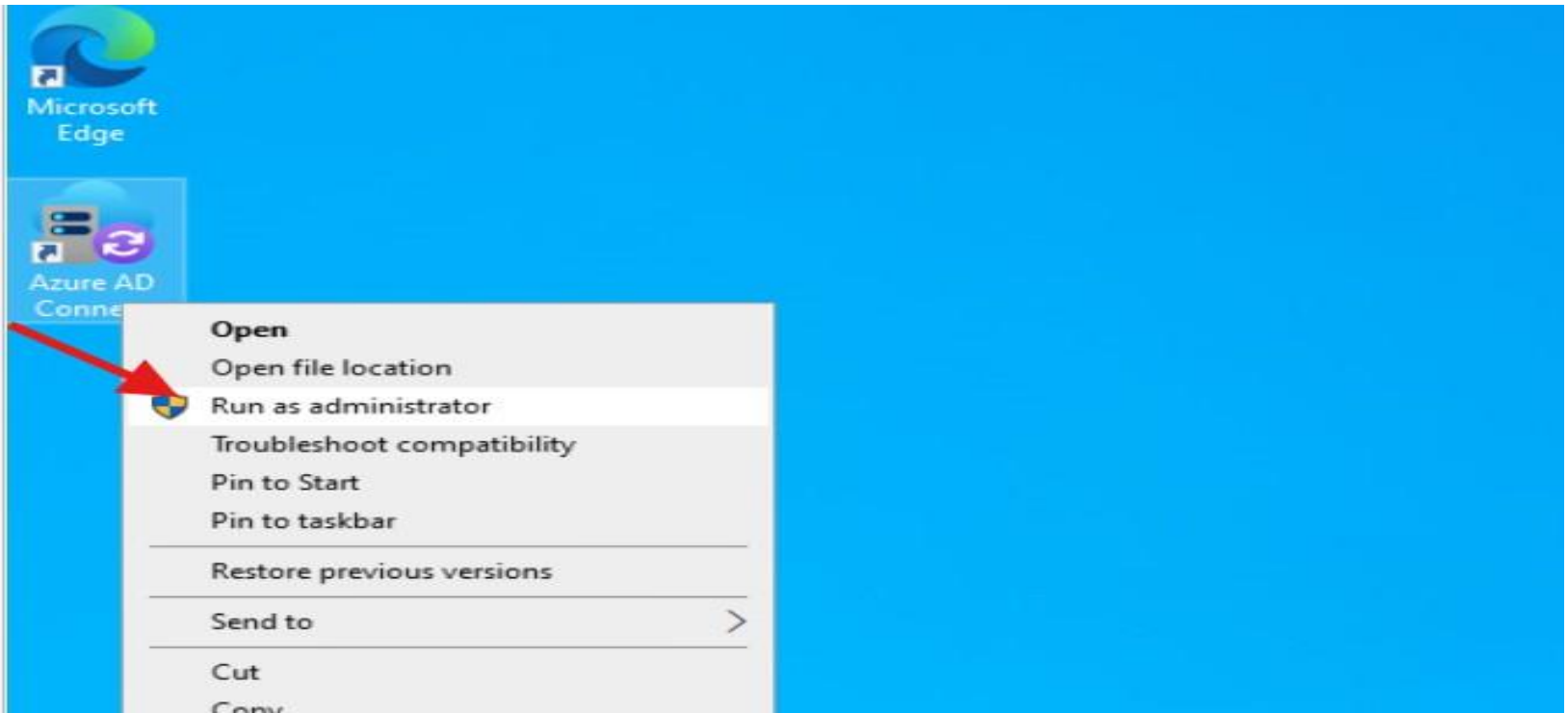
- SYNC between on-prem Active Directory and Microsoft Entra ID, the result "Success" confirms it worked.



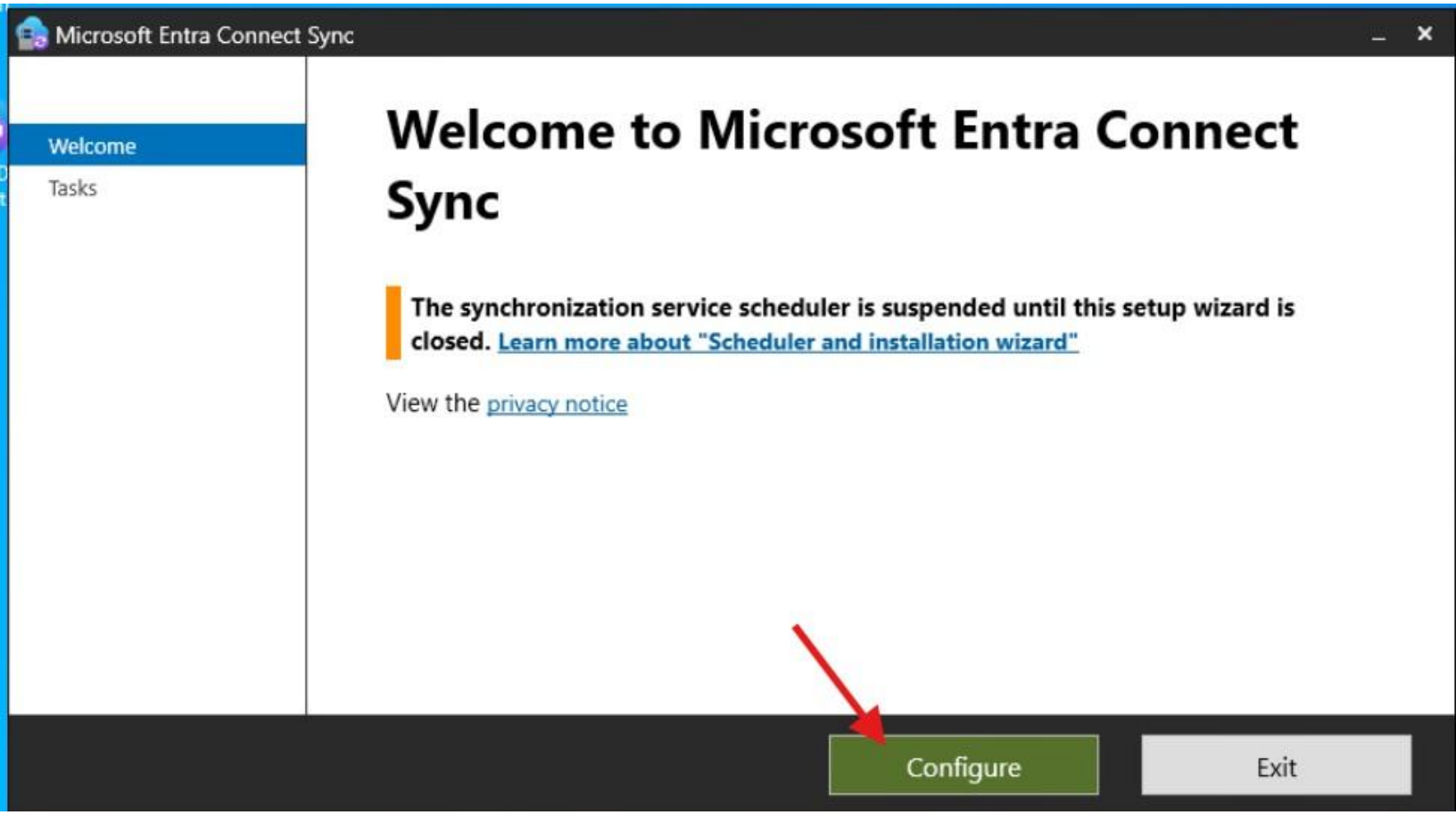


- "Run as administrator"

- This means you need to launch the Azure AD Connect tool with administrative privileges to configure or manage synchronization settings between on-prem Active Directory and Microsoft Entra ID.

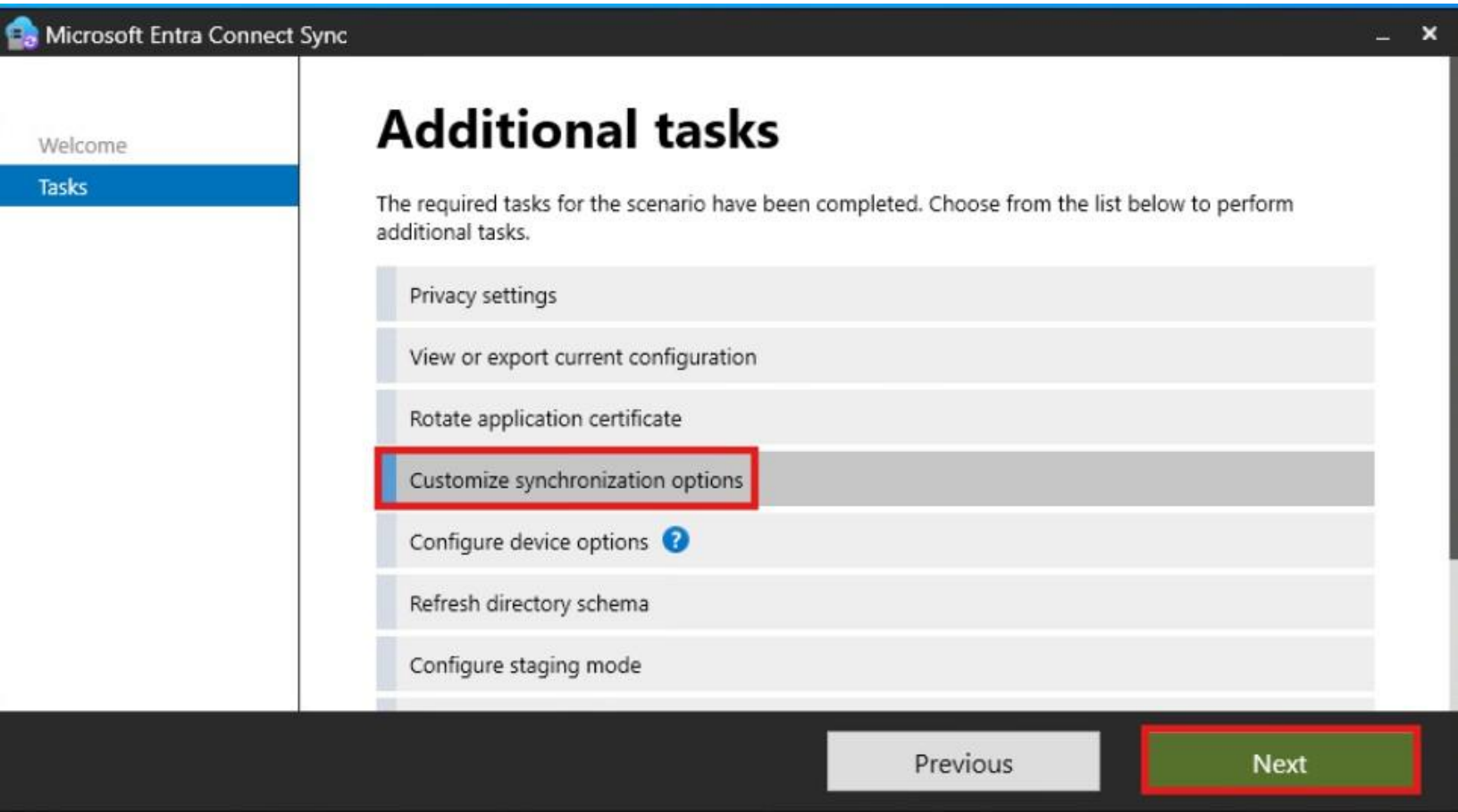


❖ Click Configure to start setting up Microsoft Entra Connect Sync.

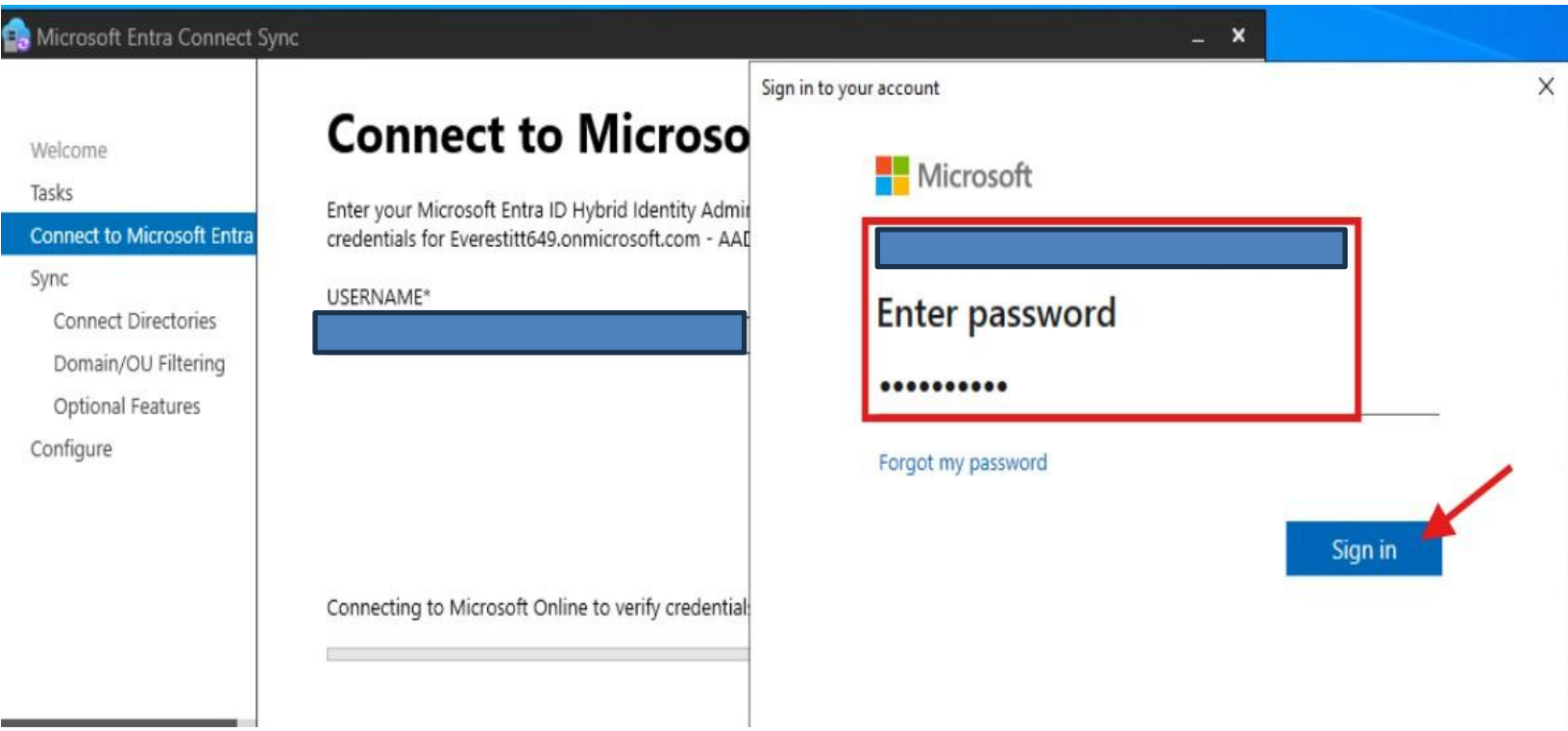


"Customize synchronization options"

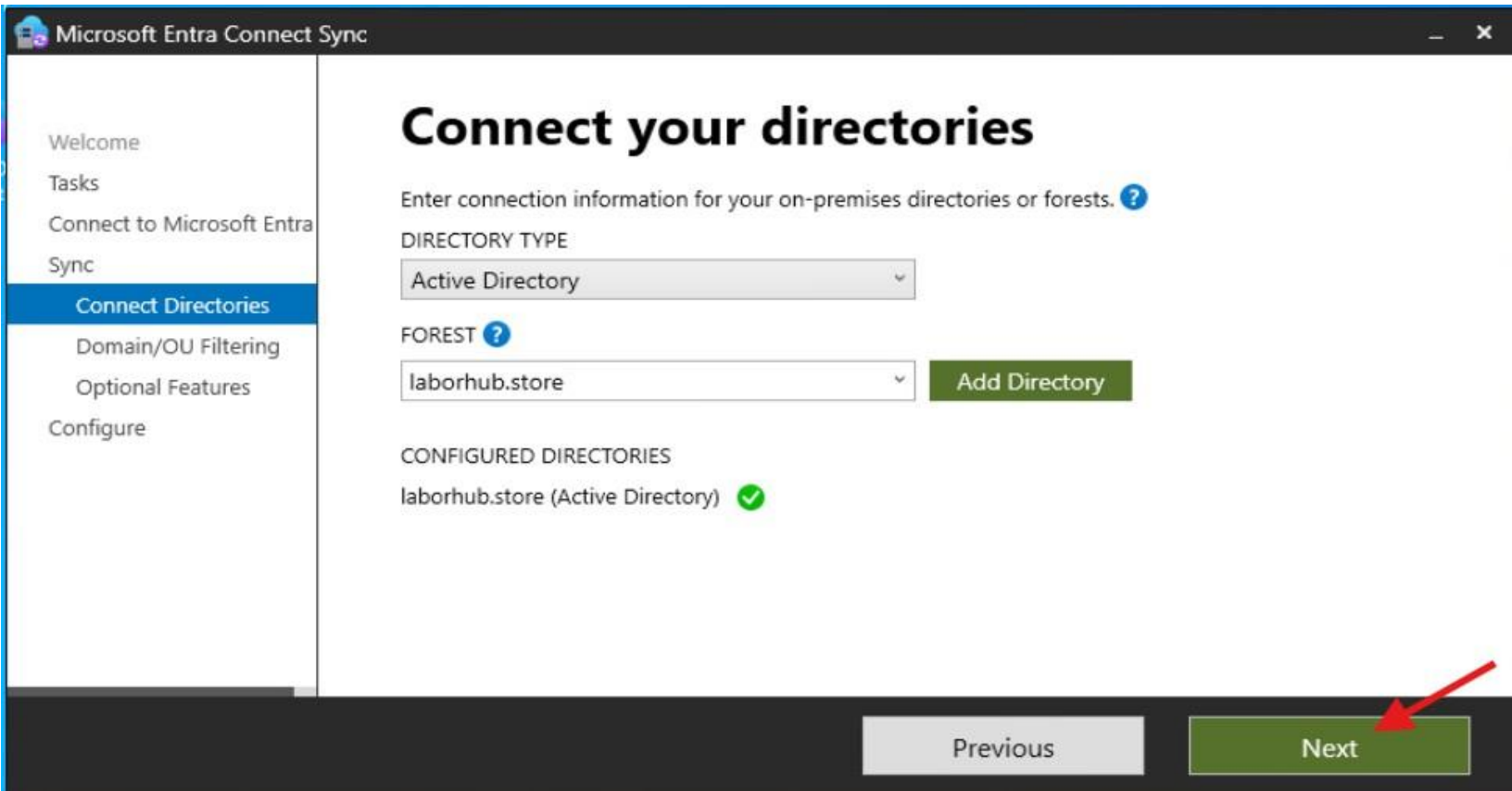
❖ This means you need to select this option to modify sync settings (such as enabling password writeback), and then click Next to proceed with the configuration.



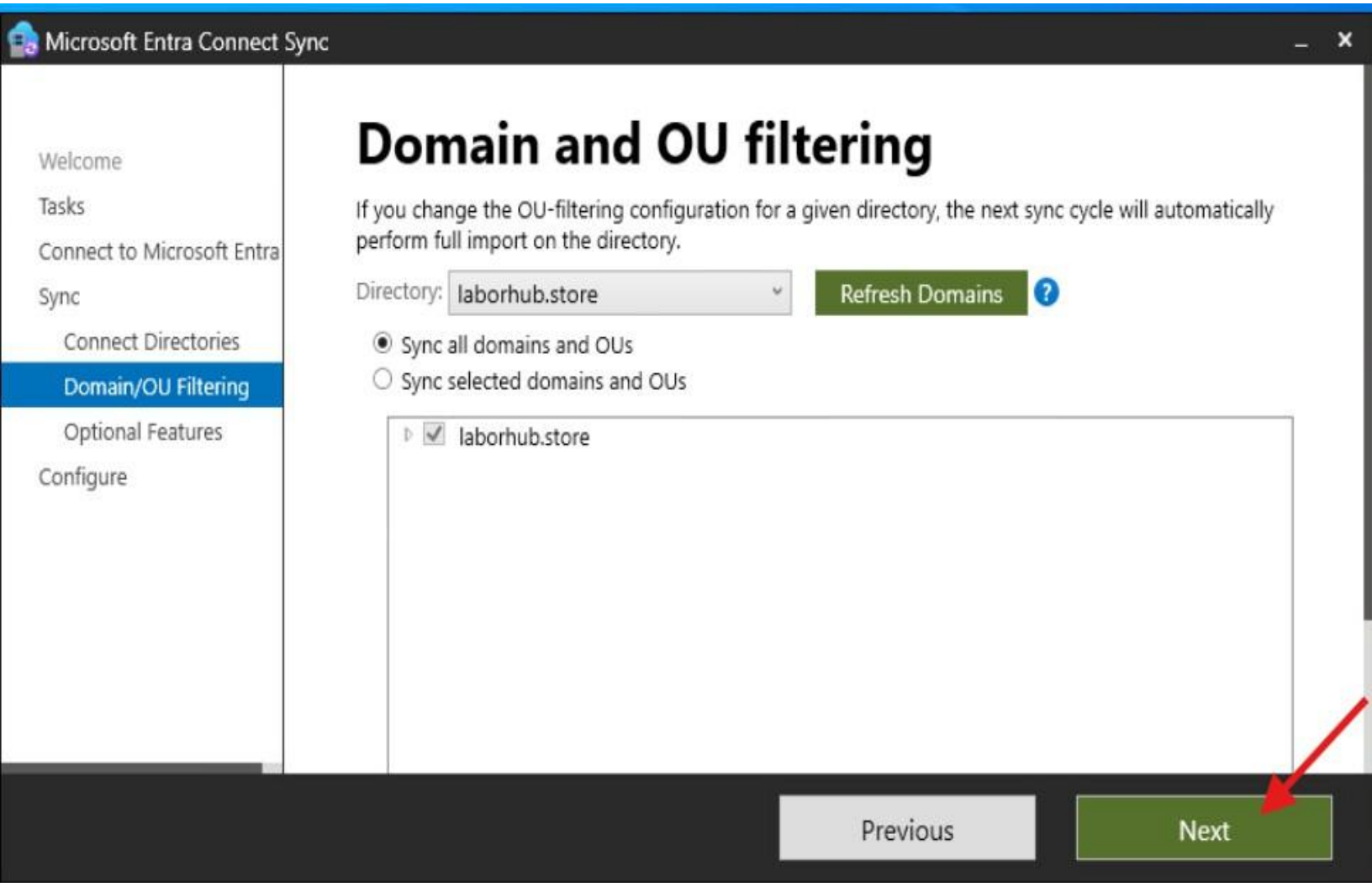
- Enter your Microsoft Entra admin credentials and click Sign in to connect Azure AD Connect to Microsoft Entra ID for synchronization setup.



- Microsoft Entra Connect Sync is used to link your on-premises Active Directory to Microsoft Entra ID. It shows that the directory type selected is Active Directory, and the forest name entered is laborhub.store, which has been successfully added and verified (indicated by the green check mark). This step ensures that your local Active Directory environment is connected for synchronization with Microsoft Entra. Once the configuration is confirmed, you click Next to proceed to the next stage of the setup.



❖ This step decides whether to sync all OUs or only selected ones from your Active Directory to Microsoft Entra.

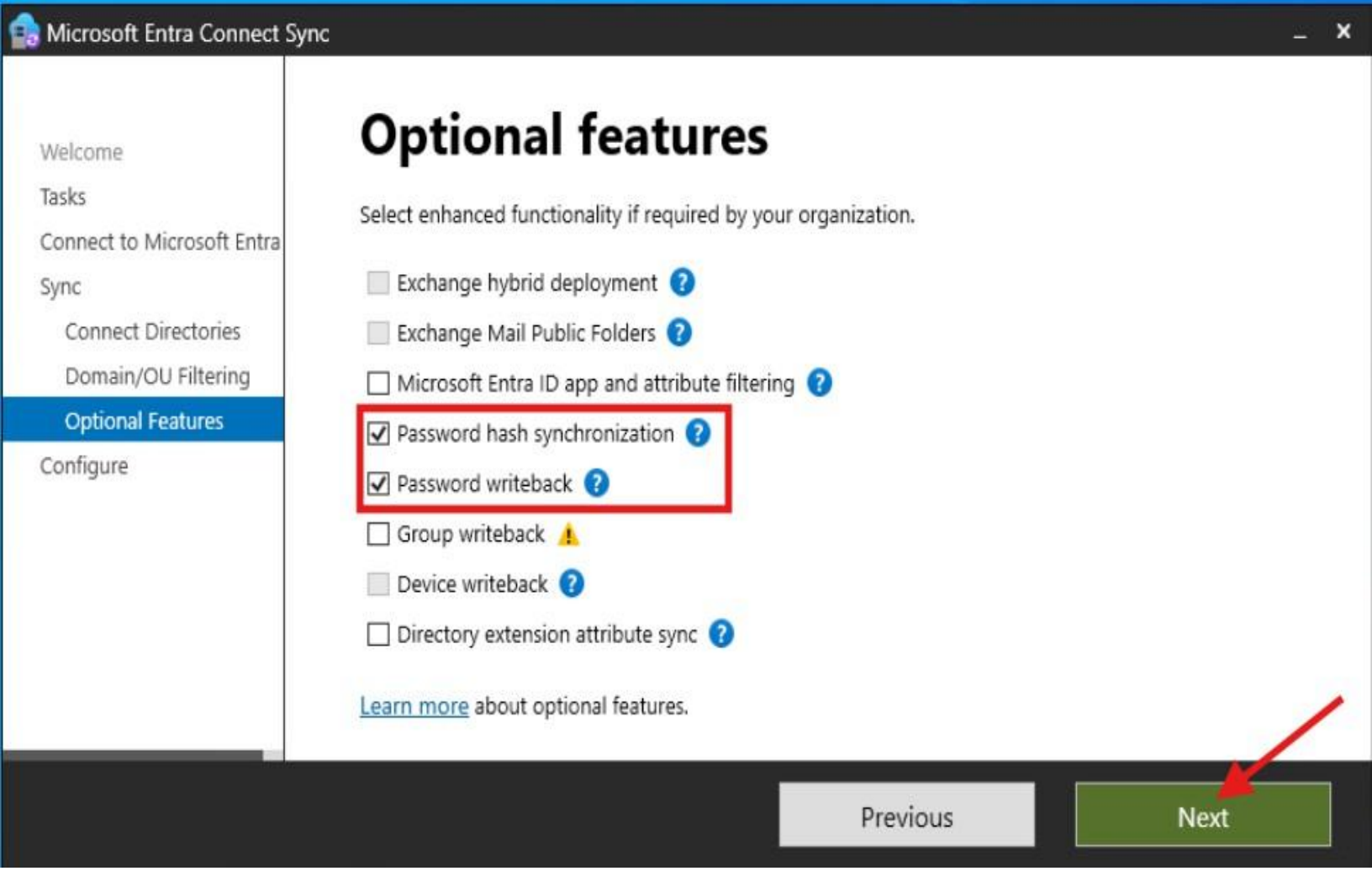


❖ This is the Optional Features step in Microsoft Entra Connect Sync. It lets you enable additional functionalities during synchronization.

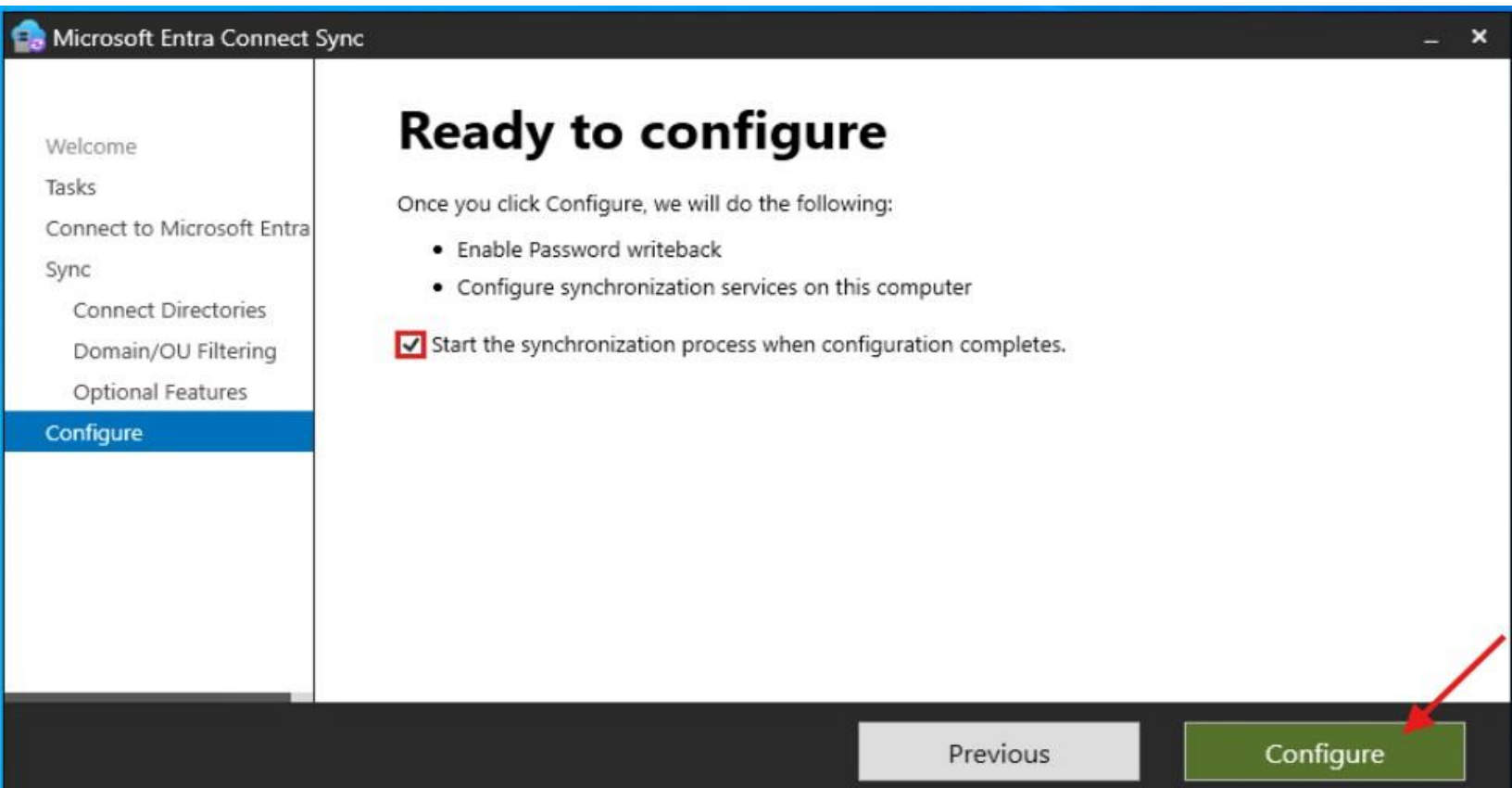
➢ Password hash synchronization is checked, which means user password hashes from on-prem Active Directory will sync to Microsoft Entra ID for cloud authentication.

➢ Password writeback is also checked, allowing users to reset their passwords in the cloud (via SSPR) and have those changes written back to the on-prem Active Directory.

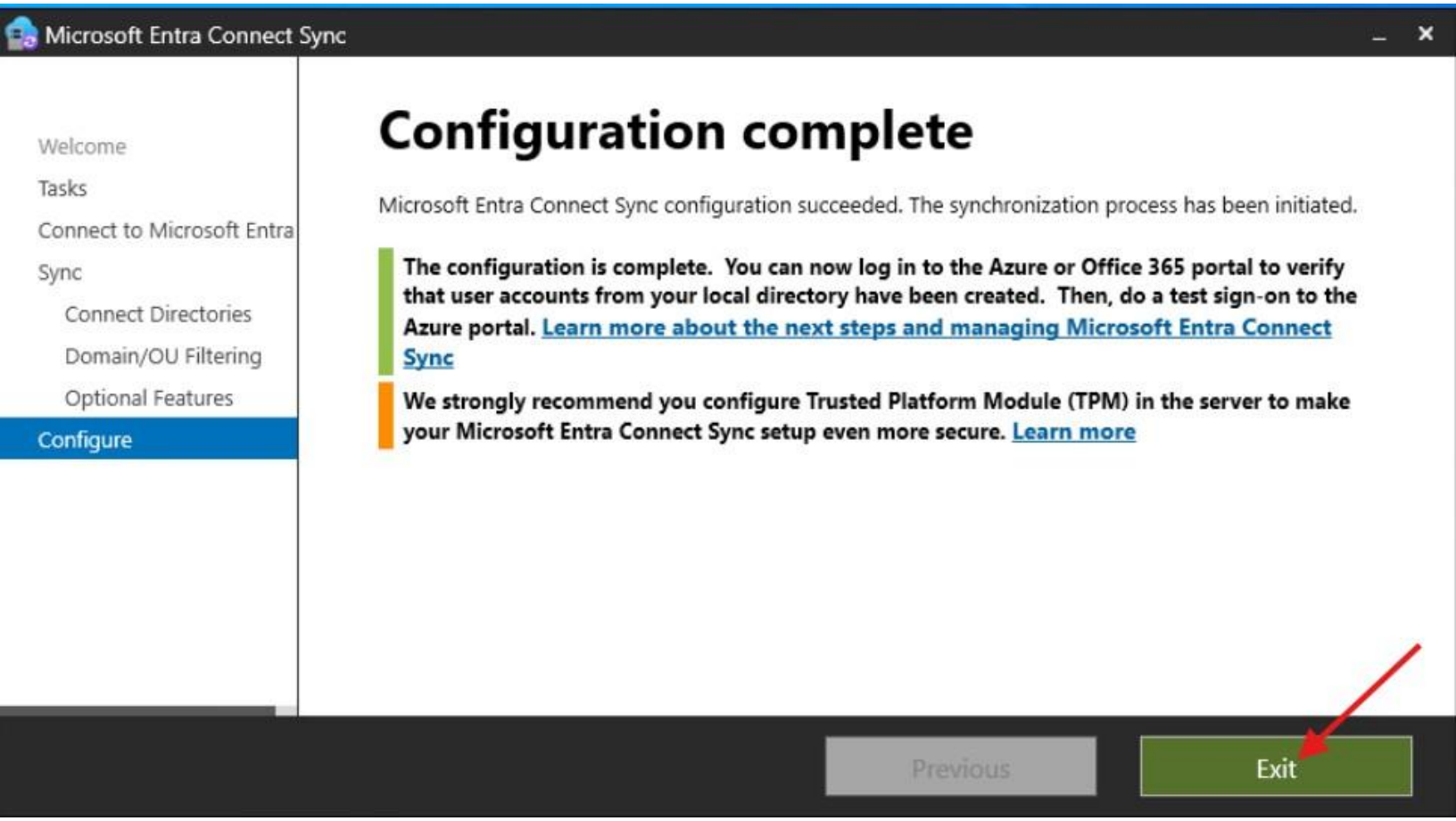
❖ After choosing the required features, you click Next to continue the configuration.



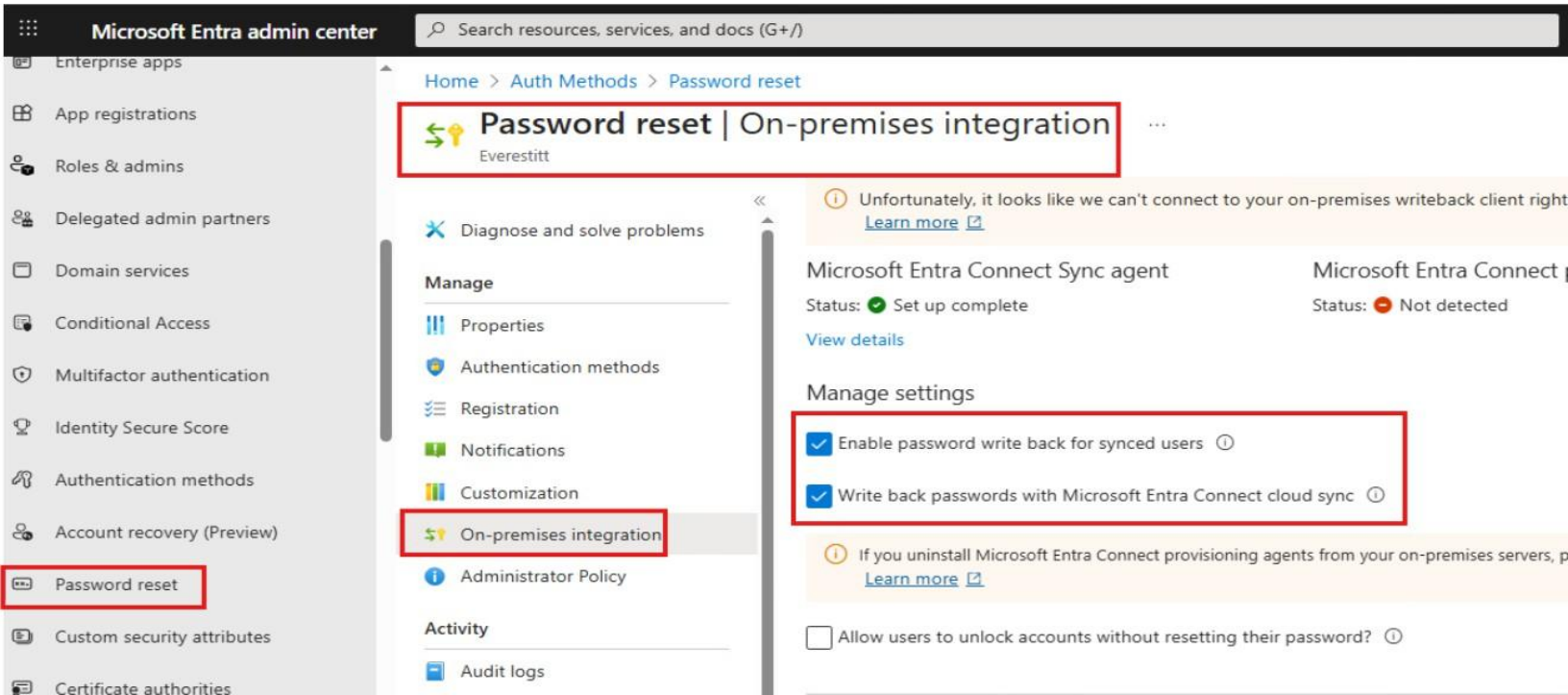
- It enables Password hash synchronization and Password writeback, sets up sync services on the computer, and begins the initial sync after clicking Configure.



- This confirms the sync setup is complete and advises verifying accounts and enhancing security.

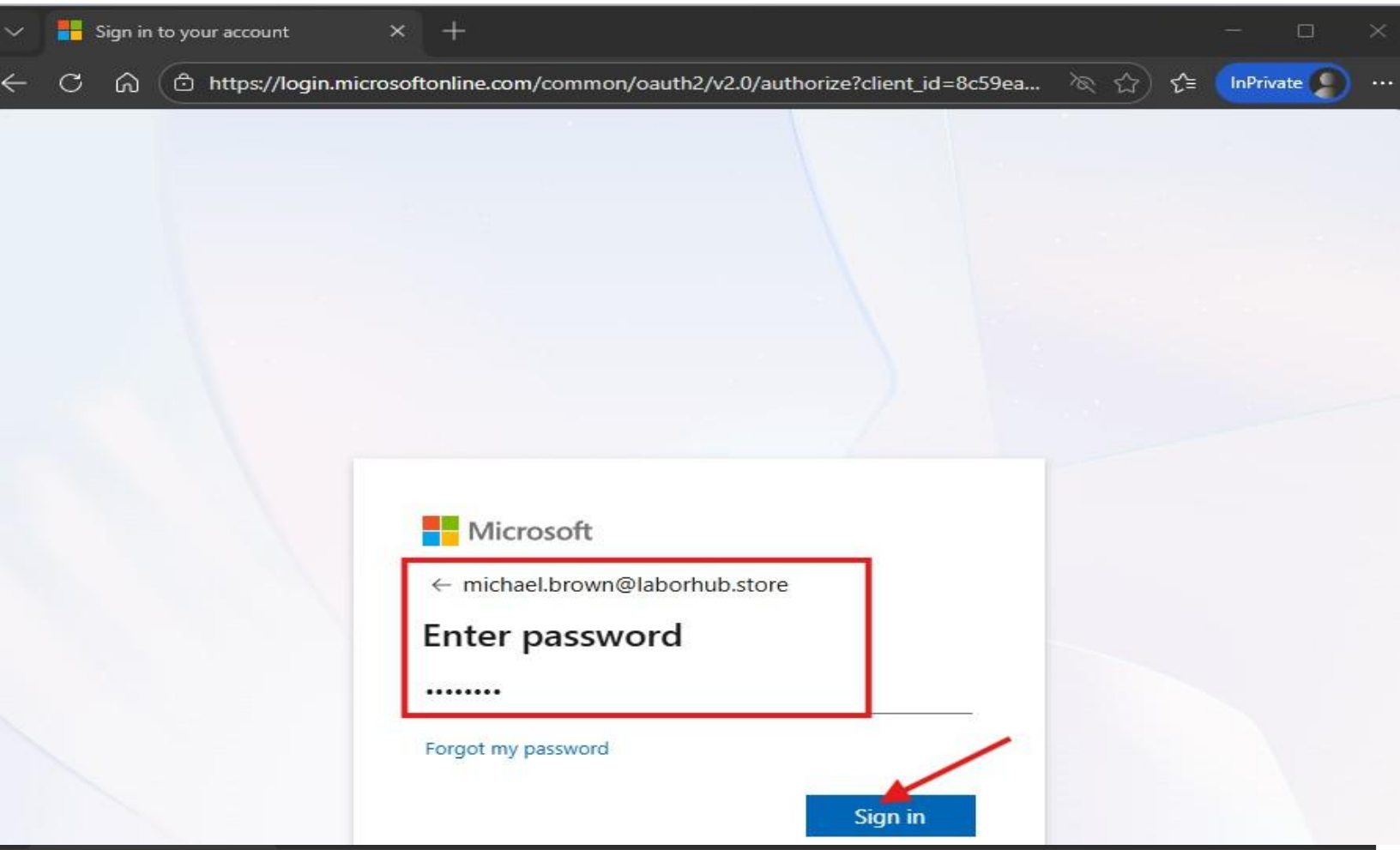


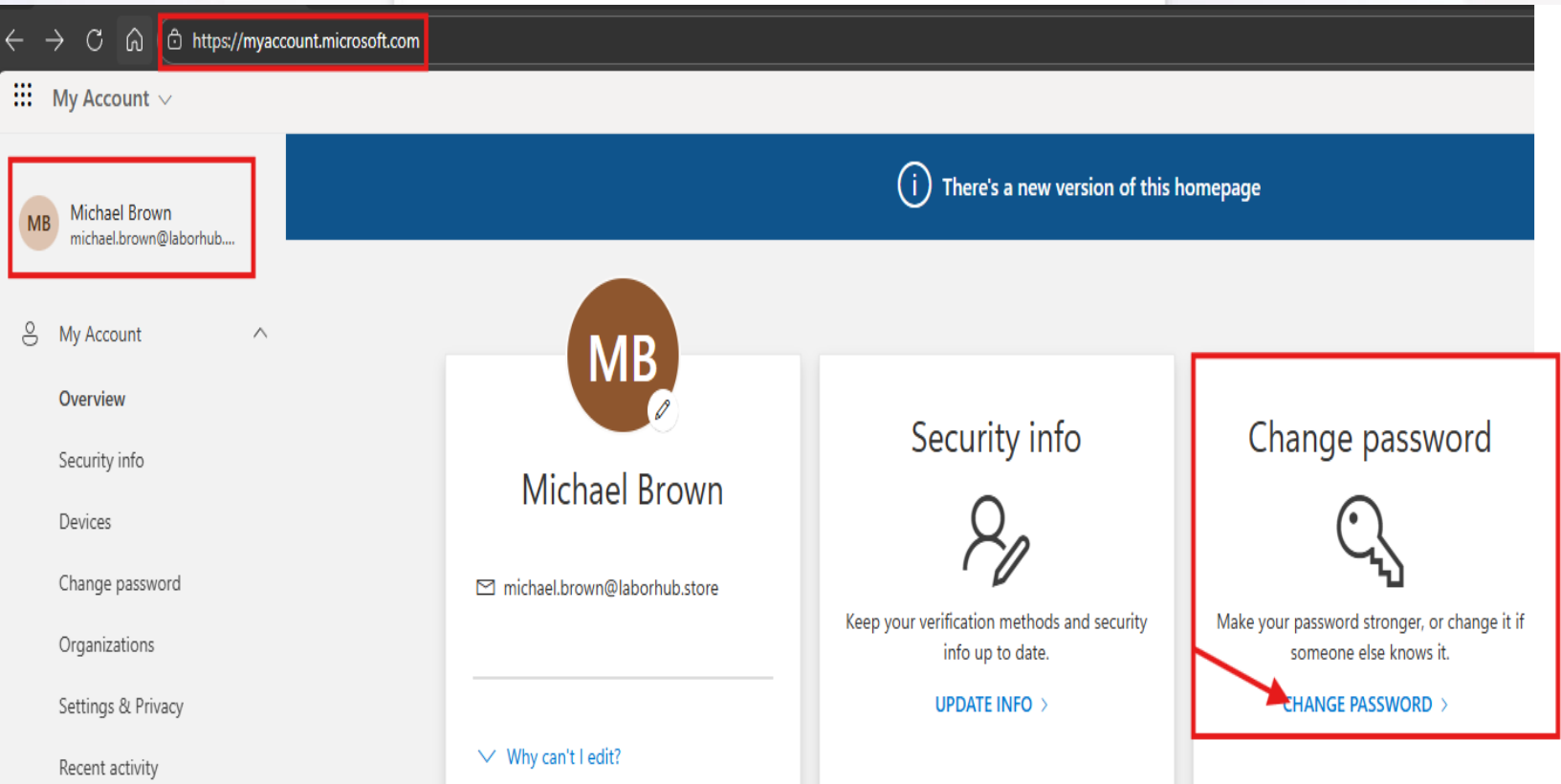
- Microsoft Entra admin center shows the On-premises integration settings for password reset. It enables two key options: password writeback for synced users and write back passwords with Microsoft Entra Connect cloud sync, allowing password changes made in the cloud to update the on-premises Active Directory. This ensures seamless synchronization between cloud and local environments.



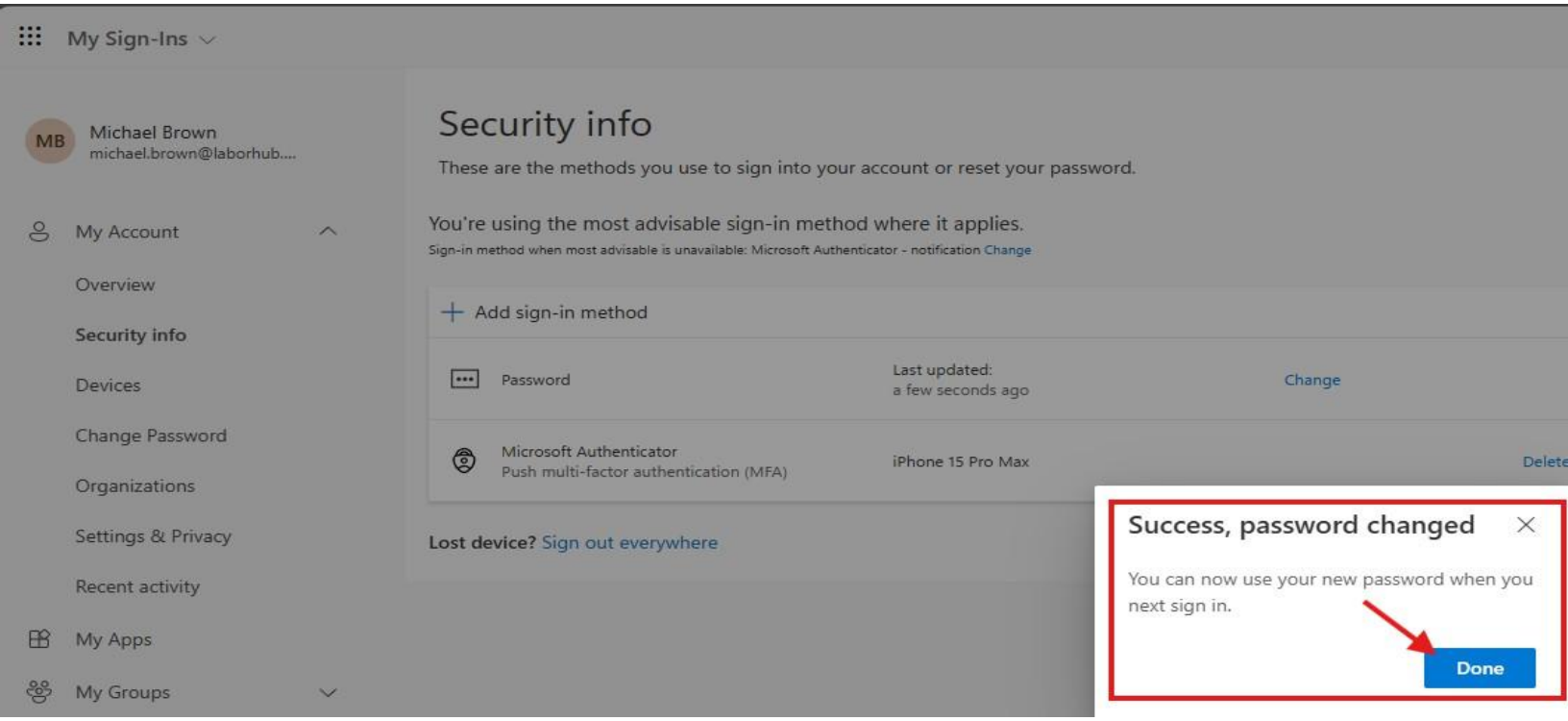
❖ Change Password While Signed In

- Go to myaccount.microsoft.com.
- Sign in with your current credentials.
- Select Change Password.
- Enter your old password, then set a new password.
- Submit and confirm the change.



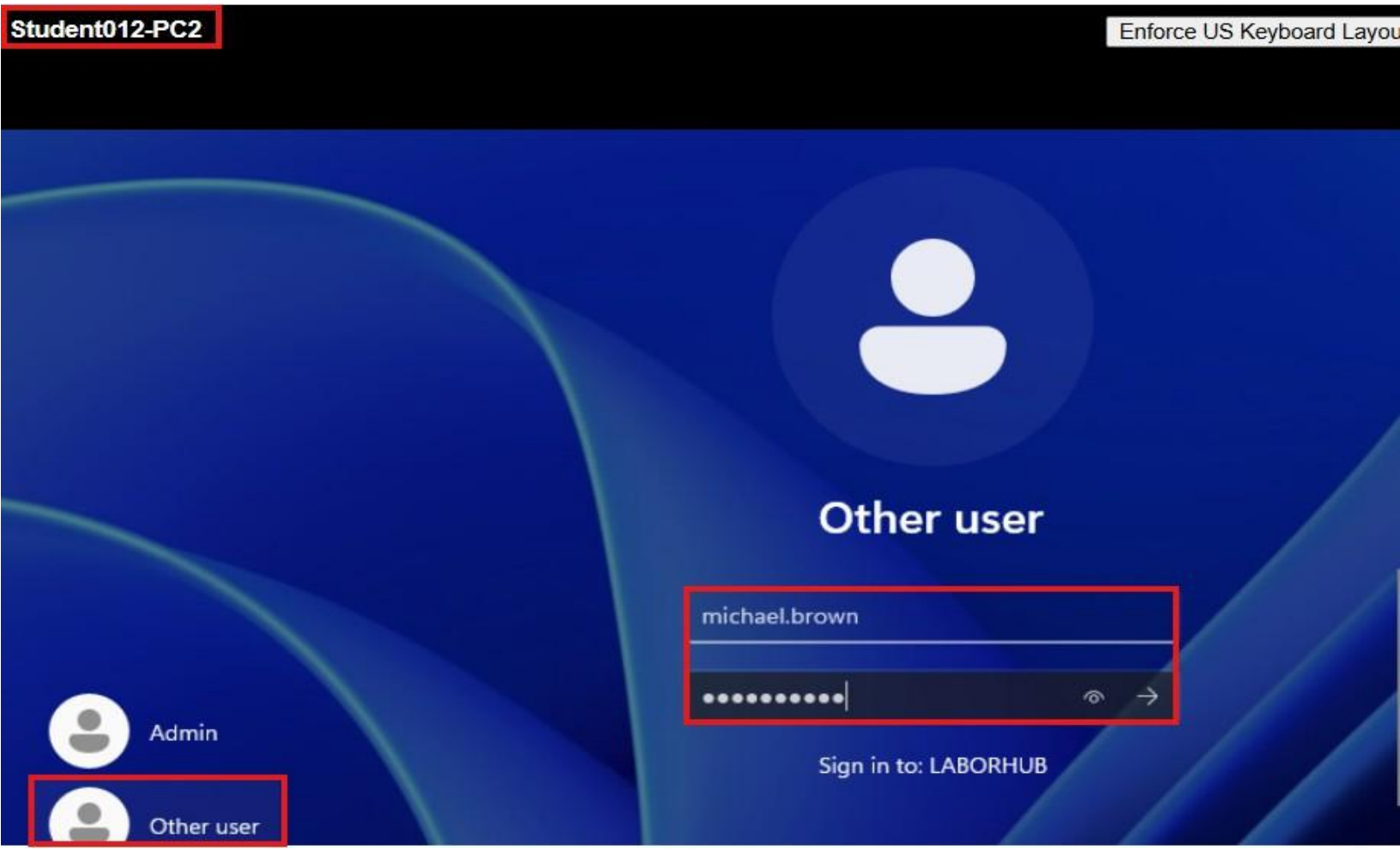


❖ Your password has been successfully changed, and you can now use the new password to sign in.



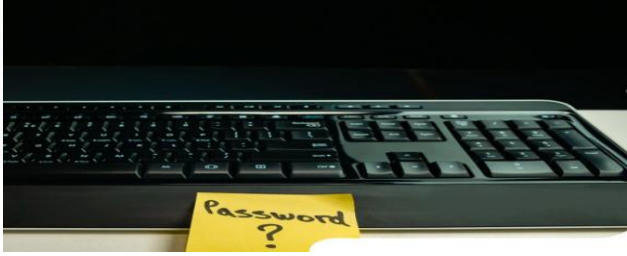
❖ Verify Password Writeback

On a domain-joined PC, sign out and log in with the new password.
If login succeeds, SSPR and Password Writeback are working correctly.



SSPR – Common Troubleshooting

Issue: User can't reset password



Common Issues and Quick Checks

Common SSPR Issues

Users may face issues like inability to reset passwords or missing authentication methods during SSPR.

Configuration Checks

Verify SSPR is enabled and authentication methods are correctly configured in password reset properties.

Password Writeback and Sync

Ensure password writeback is active and Microsoft Entra Connect synchronization is successful for on-prem integration.

End-to-End Testing

Test by resetting password online and logging into a domain-joined PC to confirm functionality.

Verify Licensing

Ensure Microsoft Entra ID P1 or higher license is active to enable SSPR functionality.

Check User Registration

Confirm users have registered authentication methods required for self-service password reset.

Audit Log Review

Analyze audit logs in the admin center to identify failed attempts or synchronization errors.

Network Connectivity Validation

Verify network connections between sync servers and on-premises Active Directory are stable.

Troubleshooting Paths

1 Check SSPR Status

Path: Microsoft Entra admin ceneter → Password reset → Properties

✓ Ensure SSPR is enabled for All users or the correct group

2 Verify Authentication Methods

Path: Password reset → Authentication methods

✓ Confirm methods like Microsoft Authenticator or SMS

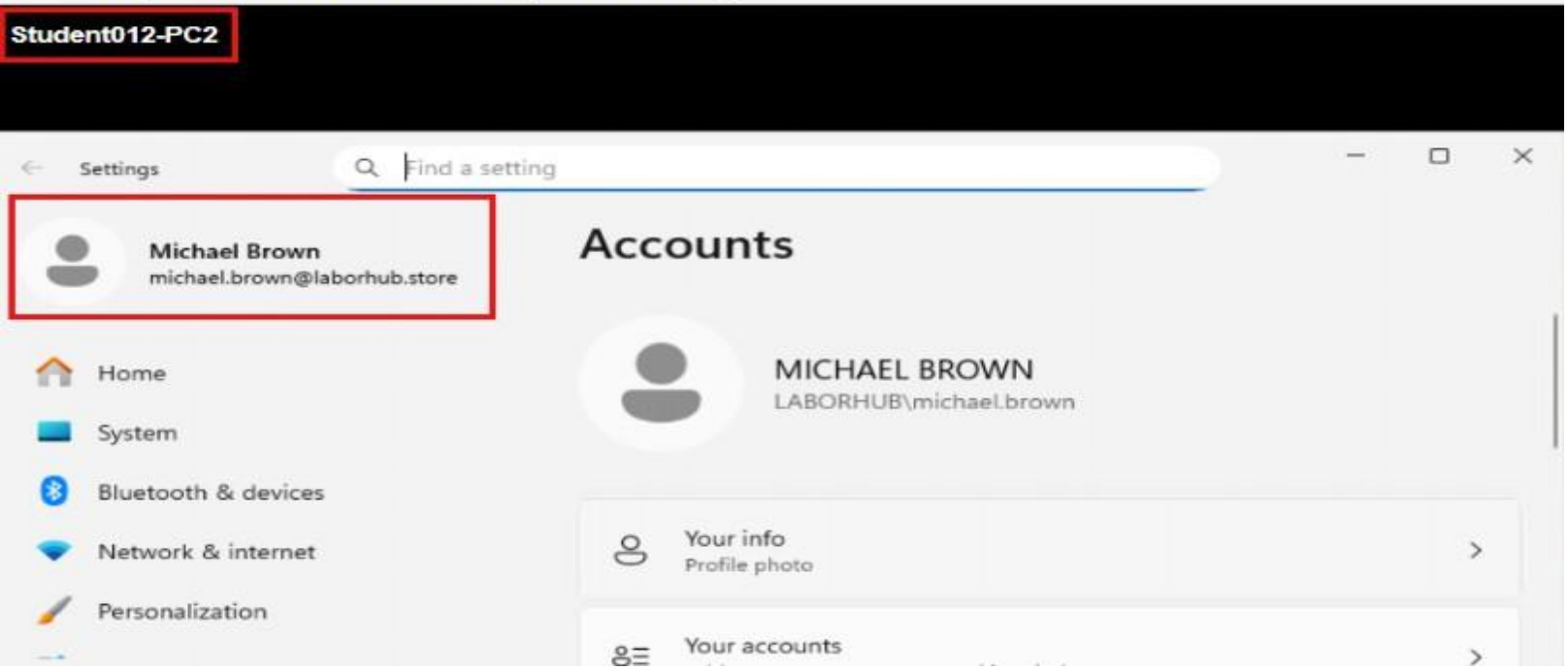
3 Confirm Password Writeback

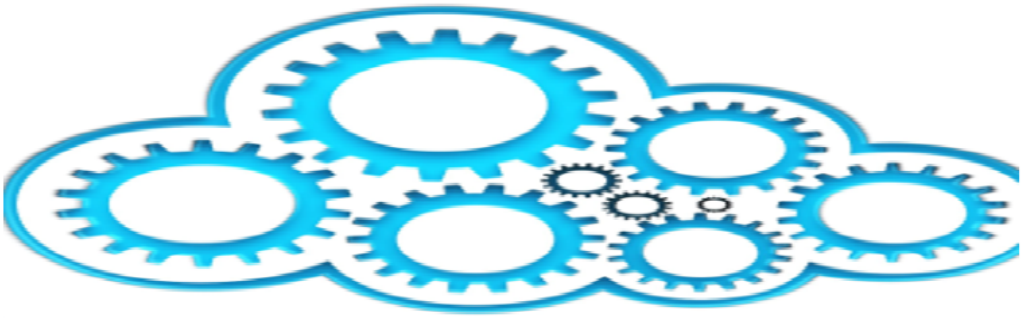
Path: Password reset → On-premises integration

✓ Passworf writeback enabled ✓ Microsoft Entra Connect status = Success

4 Test End-to-End

❖ This step confirms that the user has successfully logged in to a domain-joined PC using the new password that was reset through SSPR, proving that Password Writeback to on-prem Active Directory is working.





❑ Conclusion

This project shows how SelfService Password Reset (SSPR) can be configured using Microsoft Entra ID with password writeback to on-premises Active Directory to solve a common IT support problem. By enabling SSPR, users can securely reset their own passwords while ensuring changes are synced across cloud and local systems, which helps reduce helpdesk tickets and saves time. The project also includes practical troubleshooting steps, such as checking SSPR settings, authentication methods, password writeback status, and testing end-to-end user login, to quickly identify and fix issues. Overall, this project demonstrates real-world IT support skills, focusing on security, user experience, and reliable problem resolution in a hybrid environment.

Hybrid Identity Configuration

This project showcases configuring hybrid identity using Microsoft Entra ID and Active Directory for seamless integration.

Self-Service Password Reset

Implementing SSPR with password writeback enhances password management security and user convenience.

Troubleshooting and Support

Documented troubleshooting steps demonstrate diagnosing and resolving common hybrid identity issues effectively.

Thank You!
I hope this guide helps you implement secure password management and hybrid identity solutions with confidence.