

Migration Guides

Migrate Windows computers from source Active Directory to target Active Directory using Offline Domain Join

Valid for version 3.3x

Introduction

This Migration Guides is an aide memoir, and the intended audience is experienced migration Engineers. It does not capture all use cases and scenarios. You may need to tailor your Runbooks and Batch configurations for your particular project and requirements

Below are the high-level steps that you should review and complete at a minimum to migrate a Windows 10 or 11 workstation from one on-prem Active Directory to the target on-prem Active Directory using Offline Domain Join (ODJ).

You might be migrating computers from:

SOURCE	TARGET
Active Directory Domain joined	Active Directory Domain joined via ODJ Without network connectivity to the target domain controllers during the migration. Aka " Offline Domain Join ".

NOTE: Active Directory Trusts. If you are undertaking an Offline Domain Join migration you will need to have Active Directory Trusts in place for users to be able to Cache Credentials.

PowerSyncPro cannot force Hybrid join or Intune Enrol. This still requires your own target environment configured correctly. Workstations cannot successfully Hybrid Join until they contact a target Domain Controller.

These instructions should be read in conjunction with the latest Configuration Guide <https://downloads.powersyncpro.com/current/PSPMA-ConfigurationGuide.pdf>

STEPS

Create and Configure Directories

Create your source and target directories that you will be working with.

- Source AD
- Target AD

You must ensure that you have scoped the Import Object Types to a minimum of Users, Groups and computers / devices.

Create a Sync Profile for Migrating Users

You must have at least a “Match Only” sync profile with correctly scoped users that are your target for Windows workstation Migrations that have an active Windows profile that will require repermissioning and Apps reset. For repermissioning to happen there must be a User Translation Table, and that is built via the Sync Profiles.

Enable the DirSync Schedule

Configure and enable the sync schedule to ensure that Users and computers will be imported into the PSP Database for you to work with.

Obtain and apply a licence

You will not be able to migrate any workstations without a valid licence. You must be accurate with your domain FQDN and / or Microsoft 365 Tenant information when procuring your licence. Apply the licence at Global Settings\Licences option.

Run an end-to-end DirSync

Be sure that an end-to-end directory sync cycle has run including Import, Sync and Export

Message Logs

Check the Message Logs for **Warning and Errors**. Confirm or remediate any unmatched users

What If

Confirm the **What If** report has been checked and accepted so that DirSync will run in steady state on the schedule.

Check the Translation Table

Go to the **Translation Table** view (Migration Agent\Reports\Translation Table) and spot check any users that you know are in scope for migration. If your migrating users do NOT appear in the translation table, then **do not migrate their device**. It will **NOT** be re-permissioned.

Single Object Report

Use the single object report to spot check and search for a user or computer you are migrating.

Migration Agent Configuration

Create a pre shared key

The pre-shared key is mandatory requirement for the installation of the Migration Agent on the computer. This sets-up the initial secure channel communication.

Create a Certificate

The private certificate is mandatory requirement for the installation of the Migration Agent on the computer. This ensures that all communication between the workstation and the PowerSyncPro server is secure and encrypted.

Create Runbooks

A Runbook contains all the instructions for the Migration Agent to execute on the computer including the device join state, Intune enrolment, Windows profile repermissioning, application reconfiguration and any pre and post migration scripts.

We advocate only having one primary runbook and one prerequisite Runbook unless you explicitly need to achieve different outcomes for different batches of users and computers. Use your single Runbook and any prerequisite Runbook in any Batches you have, even if they are Early Adopters, Pilot and Main migration waves and events.

Prerequisite Runbook

As the name states, this is a Runbook that must run in advance of your primary Runbook. The main Runbook will not start until the prerequisite runbook has successfully completed.

This prerequisite runbook will set the prompt the user to cache their target Active Directory credentials so that they can log on to their computer post migration where they do not have line of sight to a target domain controller.

- **Name:** Choose any meaningful label you like. This will be seen in reports, dashboards and logs. Include the word Pre-Req or Prerequisites in the name for ease.
- **Source Directories:** This should be your source Active Directory
- **Target Directories:** This should be your target Active Directory
- **Startup:**
 - **User Interaction** should be set to "Silent Mode"
 - **Do Not Run Startup** should be selected
- **User Experience:**
 - You need to configure the appropriate wording you want presented to your end users when they are prompted to enter their credentials for Cache Credentials
- **Device State:**
 - **Cache User Credentials must be selected**
 - **Remove From** and **Domain Join** should both be set to "None"

Cache User Credentials

Cache User Credentials **must** run in advance while the users and their workstation have network connection to the target Active Directory Domain.

- **Permission Updates:** This should be set to "Don't update permissions"
- **App Reconfiguration:**
 - If you have are also migrating tenant-to-tenant migration then:
 - **Reconfigure applications should be selected**
 - **Make OneDrive Files Cloud Only should be selected**
 - If you have already completed your tenant-to-tenant migration then:
 - Nothing is required to configure here
 - **No other settings are required to be configured**
- **Completion:**
 - **Do Not Run Completion** should be selected

Main Runbook

- **Name:** Choose any meaningful label you like. This will be seen in reports, dashboards and logs.
- **Source Directories:** This should be your source Active Directory and Source Entra Tenant
- **Target Directories:** This should be your target Active Directory
- **Prerequisite Runbooks:** This is the Runbook you created earlier. Click the field to choose and select
- **Startup:**
 - **User Interaction** should be set to "Show Progress" and
 - **Do Not Run Startup** should NOT be selected.
 - Be sure to configure: An Admin fallback account, any custom pre-migration scripts, Legal Notice, Prevent Login and a Lock Screen image. PowerSyncPro can provide a default image if you prefer: https://downloads.powersyncpro.com/current/PSP_LockScreen_16x9.jpg
- **Device State:** When migrating from Active Directory to another Active Directory you should ensure that on the device State tab you
 - If you have are also migrating tenant-to-tenant migration then:
 - **Remove From All Directories** and **Domain join: Active Directory.**
 - If you have already completed your tenant-to-tenant migration then:
 - **Remove From Active Directory** and **Domain join: Active Directory.**
- **Active Directory:**
 - **Offline Domain Join** option must be selected.
 - Decide if **Reuse Existing Computer Account** is required
 - **Computer Account Org Unit:** Populate which OU devices should be added to. (See configuration guide for more information)
 - **Domain Join Username and Domain Join Password** should be populated. (be sure this account does not expire during your migrations)
 - **You do NOT need to use Cache User Credentials here, but you MUST have run it in**

a prerequisite Runbook

- **Permission Updates:** You must ensure that **add and remove permissions** is selected
- **App Reconfiguration:** If you are also switching tenants as part of this migration then you will need to also reconfigure Apps.
 - If you have are also migrating tenant-to-tenant migration then:
 - **Configure this sections as required**
 - If you have already migrated tenants and are now following up with and AD to AD migration, then
 - You do not need to reconfigure apps.
- **Completion:** Any post migration scripts

Create a Batch

Batches contain the list of computers in scope, the Runbooks to execute and the start time and date.

- **Name:** Choose any meaningful label you like. This will be seen in reports, dashboards and logs.
- **Source Directory** is your Source AD
- **Target Directory** should be your Target AD
- **Available From Time** When selected, the workstation agent shows a dialog notifying the user their migration is ready to run from this date/time onward. The user can start the migration or click Snooze to defer (Snooze is the only way to dismiss the dialog).
 - Typically, for Tenant-to-Tenant migrations you will be performing a cutover migration so you would not use the Available From option.
- **Enforced After Time** The mandatory run time. If the machine is on, no user is logged in, and the PowerSyncPro server is reachable, the migration starts within 15 minutes of this date/time.

For testing and early adopters: You can create your batches with an **Enforced After** date far in advance if necessary but then have the **Available from** closer to your present time to facilitate self-service migrations and testing. For Production migrations you should settle on the actual date you will use.

Batches can have multiple Runbooks

Do not have computers in multiple Batches.

Adding a computer to Batch less than 24 hours before migration is unlikely to be successful unless you restart the PowerSyncPro service on the Computer. Always ensure that you have a valid and populated Translation Table for your use case.

Do not forget to include your prerequisite Runbooks

Confirm a working migration endpoint URL

If you are using IIS with a reverse proxy your endpoint will be https (TCP port 443) using your friendly DNS name and a valid SSL certificate binding. E.g. <https://powersyncpro.contoso.com/Agent>

To test: From an in-scope computer open the browser and connect to the URL this should resolve successfully to a landing page.



If you are using the *default installation, (not recommended)* then your endpoint will be the PowerSyncPro server FQDN with TCP port 5000. Typically, this would be only used for your initial end-to-end testing. E.g. <http://pspsserver.contoso.local:5000/Agent>

The PowerSyncPro server endpoint URL must be available at the start of the migration to confirm the latest runbooks and scheduling information, and critically to get SID translation data from the server during the migration. Once the computer migration has started, reporting information such as migration status and logging will be written back to the server.

Agent Installation

The .NET 8.x Desktop Runtime prerequisites must be installed. These can be installed separately in advance or bundled with the complete PSP Migration Agent Installer. It is more common to use the bundled version.

Agent Registration

Confirm that Agents are successfully registering on the PowerSyncPro server by reviewing the Agents view and Failed Communications report.

Checklist

TASK	COMPLETE
Create and configure Directories	
Create and configure Sync Profile for Users and Groups	
Enable the schedule	
Obtain and apply a software licence	
Run an end-to-end Import/Sync/Export	
Check Message Logs for Warnings and Errors	
Confirm the What If report	
Spot check the Translation Table	
Spot check the Single Object Report	

Agent Preparation	COMPLETE
Create a pre shared key and Certificate	
Create Runbooks and Batches – including prerequisite Runbooks specifically " Cache User Credentials "	
Ensure the Domain Join service account will not expire	
Confirm a working PowerSyncPro server endpoint URL	
Confirm Microsoft 365 tenant Entra join and Intune Enrol settings	
Confirm Agent Installation with prerequisites	
Confirm Agent Registration and profile harvests	
Test with non-production users and computers	

Documentation

We take a lot of pride on the documentation. If you follow the guides, we believe that you should be able to get yourself up and running. <https://powersyncpro.com/documentation>

Knowledge Base

We are regularly adding and updating articles in the Knowledge Base, so also try here as a good resource. <https://kb.powersyncpro.com/>

Support

Support is available from: <https://tickets.powersyncpro.com/>

If you are logging a ticket, be prepared to send the Migration Event Logs plus Windows Application Event logs from the affected computer and the Server / Agent version.