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Environment Manager
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Environment Manager Policy

Windows 10 Migration Accelerator

Contents

Document Purpose

This document is a technical guide to accompany the Windows 10 Accelerator Policy configuration that is available on the Ivanti Marketplace.

The primary use-case for this configuration is a Physical Windows Device environment where users predominantly have their own device. Once the profiles settings have been migrated, the user does not need to necessarily use the same device in a Windows 10 world. If we have exported their settings, any device with our EM Agent and configuration will import their settings/data at first logon.

The document doesn't require expert knowledge of Ivanti Environment Manager, but further guidance on functionality can be found on our Help portal.

Ensure that you are using the correct version as specified within the Document version history.

Introduction

This configuration that enables organisations with an 'instant' method of migrating User settings and data. With minimal updates required you can deploy the configuration and start to migrate your users data prior to migration. The phases of migration are all tracked and when used in conjunction with Ivanti Endpoint Manager (EPM) & Xtraction, organizations have a single dashboard that can be used to control and track migrations within your environment.

It is not a requirement that this is used in conjunction with Endpoint Manager (EPM) & Xtraction, but this will provide a full Migration workflow (OS/Applications/User Data and settings/Deployment/Monitoring).

This configuration will continue to be maintained with updates being made available on the Ivanti Martketplace. At present we provide Out of Box settings to persist a host of Windows (Credentials, Printers/Devices, Drive Mappings, Accessibility, Run/MRU History…) and Application (eg: MS Office, Chrome, IE, Firefox, Java, Adobe…) settings in addition to Standard User Document Folders (eg: My Documents, Pictures, Desktop, Music…).

This configuration has no dependency on Environment Manager Personalization.

Deployment

The configuration can be deployed via any deployment tool and will run on any endpoint with the Environment Manager 10.1 Agent installed (w/Valid License).

When deployed as part of the Ivanti Windows 10 Accelerator, Ivanti Endpoint Manager should be utilized to deploy the Agent & Configuration MSI Packages. Should you make updates to the configuration, you will need to subsequently update the associated deployment package.
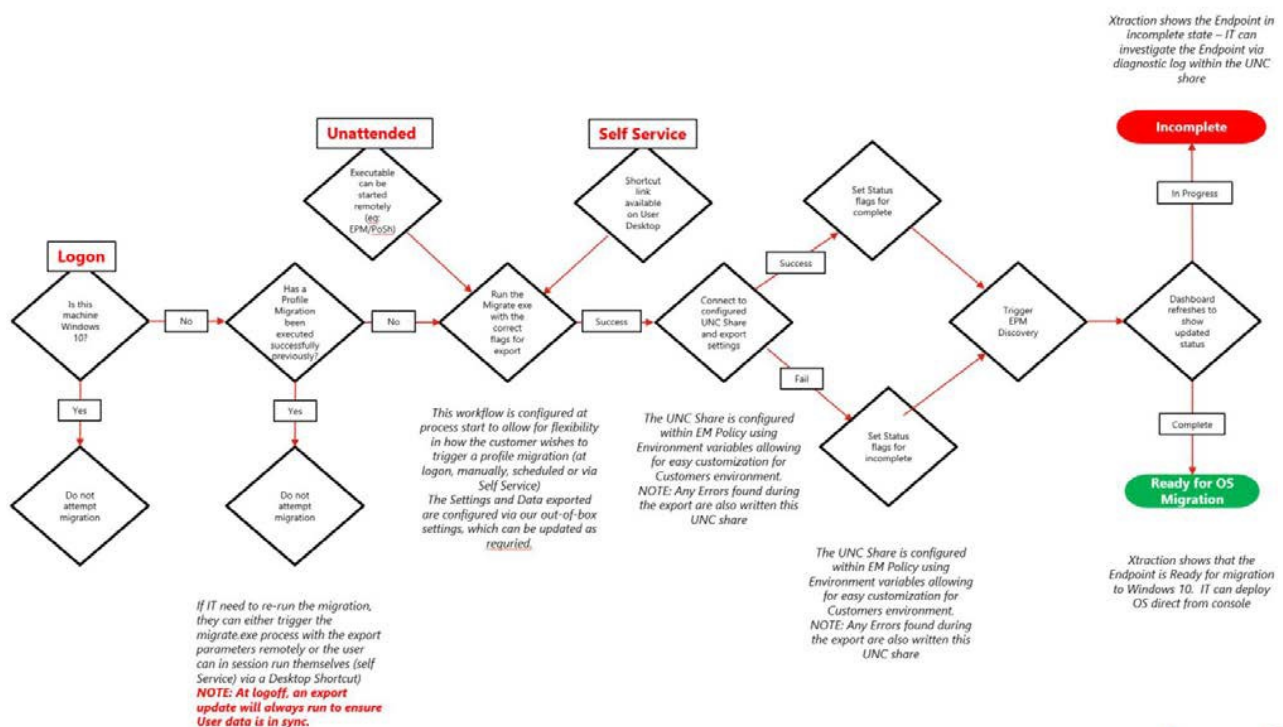
The only configuration you MUST update before deployment is the %MigrationDataPath% variable that is created within the Global settings **node. All other settings can be optionally amended if required based on use case.**

Overview

The following flow diagrams demonstrate how the policy works in the common scenario that the migration is triggered during User Logon. It also outlines how EM interacts with EPM & Xtraction for an end-to-end view of your Windows 10 Migration.
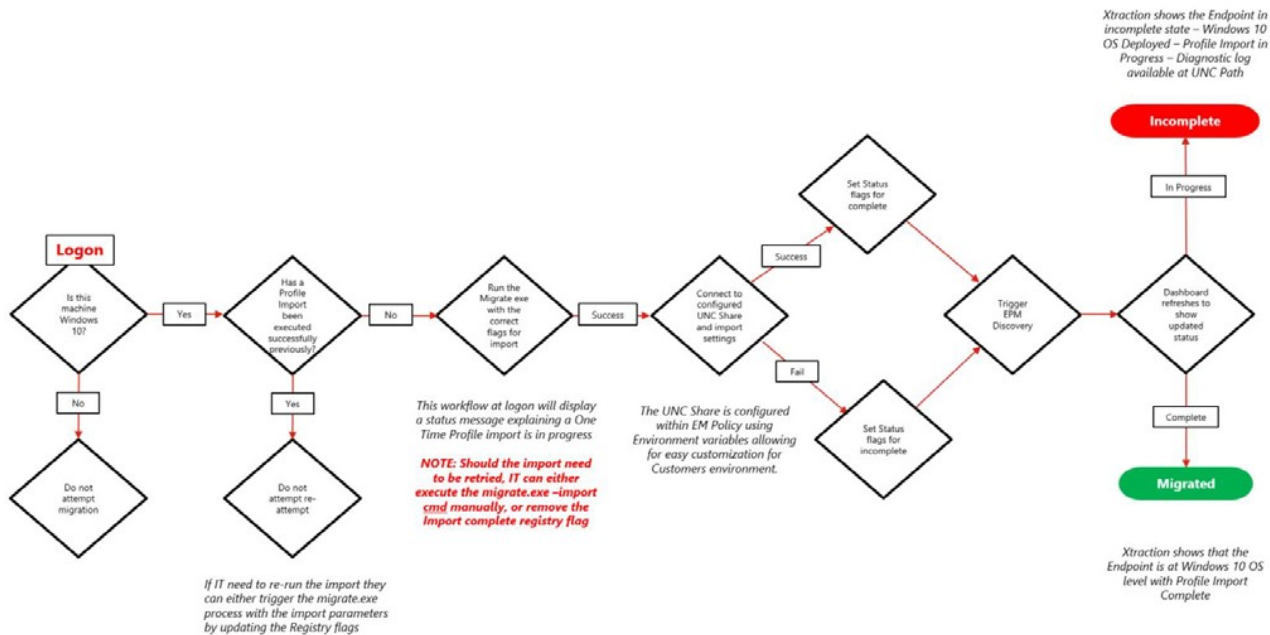
Profile Export

EM Policy – Windows migration workflow (Pre Windows 10)

Profile Import

EM Policy – Windows migration workflow (Windows 10)

Xtraction shows the Endpoint in incomplete state – Windows 10 OS Deployed – Profile Import in Progress – Diagnostic log available at UNC Path

Incomplete

In Progress

Logon

Is this machine Windows 10?

Yes

Has a Profile Import been executed successfully previously?

No

Run the Migrate exe with the correct flags for import

Success

Connect to configured UNC Share and import settings

Success

Set Status flags for complete

Fail

Set Status flags for incomplete

Trigger EPM Discovery

Dashboard refreshes to show updated status

No

Do not attempt migration

Yes

Do not attempt re-attempt

Complete

Migrated

This workflow at logon will display a status message explaining a One Time Profile import is in progress

NOTE: Should the import need to be retried, IT can either execute the migrate.exe –import cmd manually, or remove the Import complete registry flag

The UNC Share is configured within EM Policy using Environment variables allowing for easy customization for Customers environment.

If IT need to re-run the import they can either trigger the migrate.exe process with the import parameters by updating the Registry flags

Xtraction shows that the Endpoint is at Windows 10 OS level with Profile Import Complete

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Environment Manager Configuration Setup

The supplied Configuration has been created with the latest version 10.1 FR4, however it is possible to provide similar functionality on earlier releases.

For convenience, the Policy is also self-documented via the **Notes** option within a node, for example:
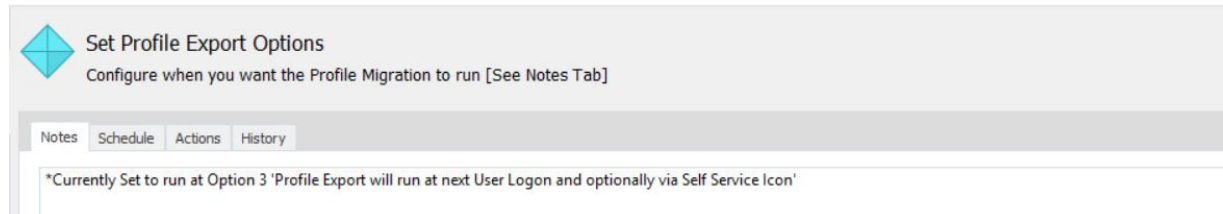
Error Handling

The policy has been configured to write any errors to the Migration Data Path that is specified for each user during logon. Should an Administrator need to determine why a migration has not completed successfully they should firstly reference the errors.log file which will detail the reason for the issue.
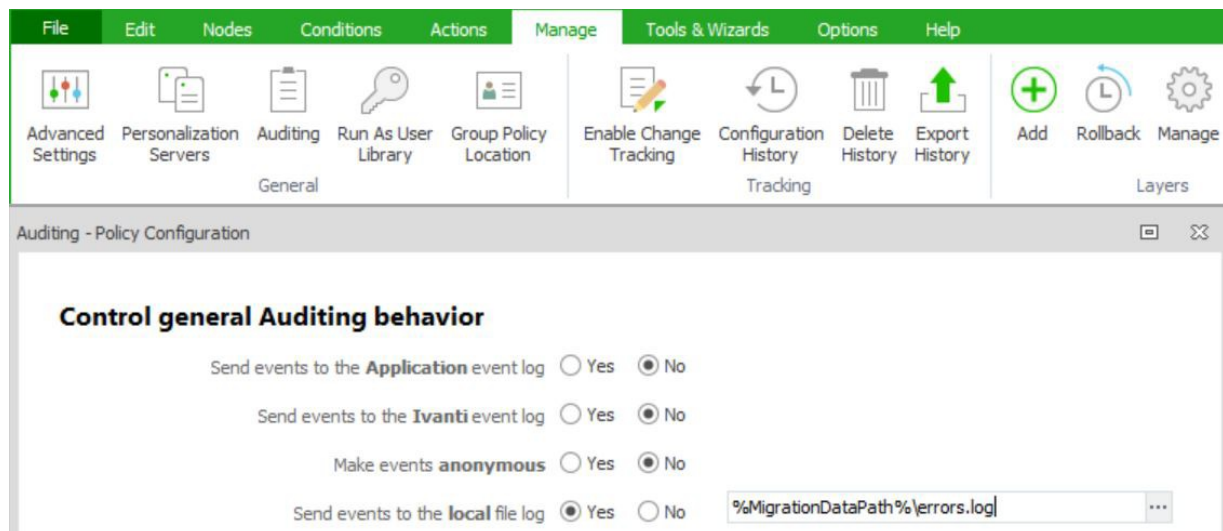
Computer Start-up Trigger

Helper Tools

At start-up, EM will create a 'dummy' executable that is used purely to trigger process actions. For this use case, the migrate.exe created here will be executed with an appropriate -import or -export parameter within the later sections of the configuration.

This section does not need to be amended and can be left in its out of box state.

Set Profile Export Options

To ensure that the migration is triggered only when IT require it, you can enable the correct option as required for your users. By default, you can leave as it is and you will have the behavior described below.

Should you, the options will also be discussed in the following table.

Action	Details
1	• Condition to ensure that the export options are only configured on Pre-Windows 10 Devices
2	• Check to see if a previous migration export has completed successfully, only proceed if this is not the case
3	• By default, EM will set the Profile Export flag to run at Logon, this status is then used during a Registry check at logon to start the migration process. It is possible to disable this action and instead enable one of the other options from the list. A complete list of provided options are: o 1 - Profile Export will run at next User Logon* o 2 - Profile Export will run via User Self Service (Desktop Shortcut) * o 3 - Profile Export will run at next User Logon and optionally via Self Service Icon* o 4 - Profile Export will only run at next User Logoff o 5 - Profile Export will only run at next User Logoff and optionally via Self Service Icon *Note that options 1 ,2 & 3 will always run an update sync at logoff. The Profile Data copy at logoff will only sync any new changes or files.

Logon Trigger

Pre-Session

Global Settings

This points to a reusable node.

The Set Environment Variable action must be amended to ensure that the *MigrationDataPath* variable contains the correct information to ensure users can successfully migrate their profile data/settings.

Global Settings
Set the %MigrationDataPath% variable to reference the UNC Path location that will be used during Profile Export.

| Notes | Actions | History |

Action	Enabled	Stop sub nodes on fail
Comment: MigrationDataPath: the user must have read/write permission on that folder	✓	☐
Set environment variable 'MigrationDataPath' to be '\\[file-server]\[share]\%username%.migration'	✓	☐
Comment: MigrationLogPath: the system account (through e.g. the AD group domain computers) must have write permission on that folder	✓	☐
Set environment variable 'MigrationLogPath' to be '\\[file-server]\[share]\%computername%'	✓	☐

In addition, the second Set Environment Variable action must be amended to ensure that the *MigrationLogPath* variable contains the correct location for the log file.
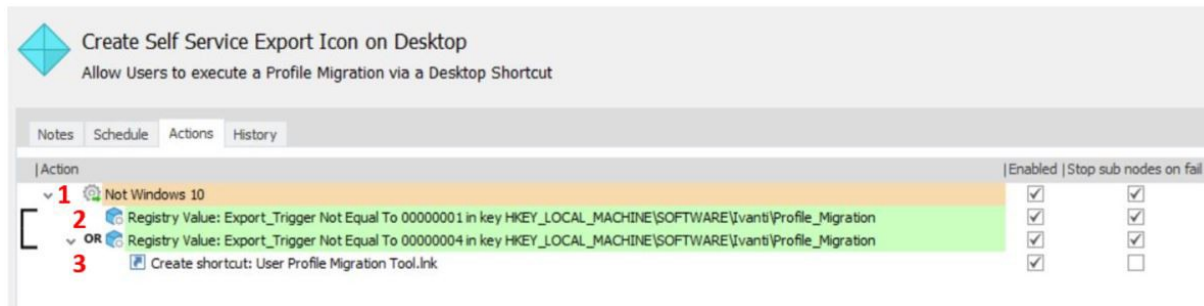
Action	Details
1	• This location will ordinarily be a Network location (e.g. Users Home drive) for all User Data/Settings exported during the migration. It is possible to further update this section with condition logic to set the variable based on location or group membership.

Pre-Desktop

Create Self Service Export Icon on Desktop

Allow Users to execute a Profile Migration via a Desktop Shortcut.

This Node will check the Profile Export Registry Flag (created during Computer Startup) and create the Migration shortcut if the condition passes successfully.
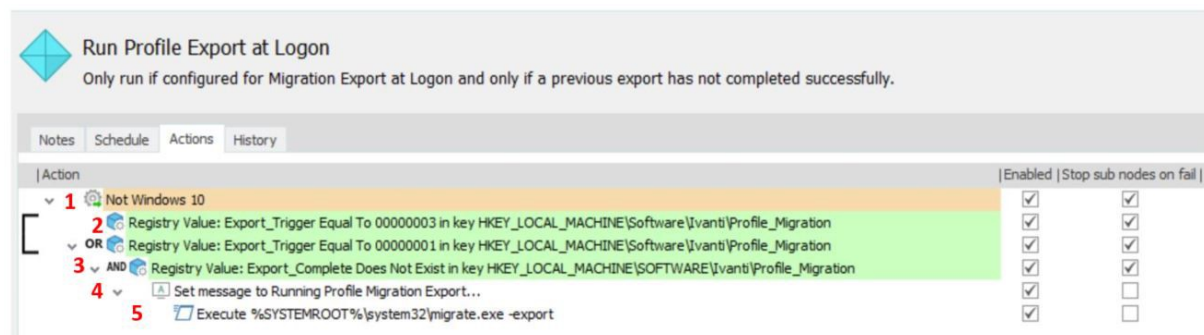

Action	Details
1	• Condition to ensure that the export options are only configured on Pre-Windows 10 Devices
2	• Further logic to only create the shortcut if the Export Trigger is set for this option
3	• Create a Desktop shortcut to *%systemroot%\System32\migrate.exe* with the command line parameter *-export*

Run Profile Export at Logon

This node will only trigger a migration if configured if configured to do so and if a previous export has not yet completed successfully.

Action	Details
1	• Condition to ensure that the export options are only configured on Pre-Windows 10 Devices
2	• Further logic to only create the shortcut if the Export Trigger is set for this option

3	• Should a previous migration export have completed successfully, we will skip running once more at logon. However, the policy will run a sync at Logoff to ensure changes are copied to the Migration location.
4	• During processing the User will receive a message to indicate that a Migration is in progress
5	Should the logic in steps 1,2 & 3 pass successfully, the migrate.exe is launched with the specific -export parameters. See the Process Start trigger section for Migrate.exe -export for details on this subsequent workflow

Run Profile Import at Logon

Configured to run a 'one time only' user migration import on Windows 10 machines, the bulk of the import is contained within the *Profile Import* re-usable node should the base condition logic pass successfully.
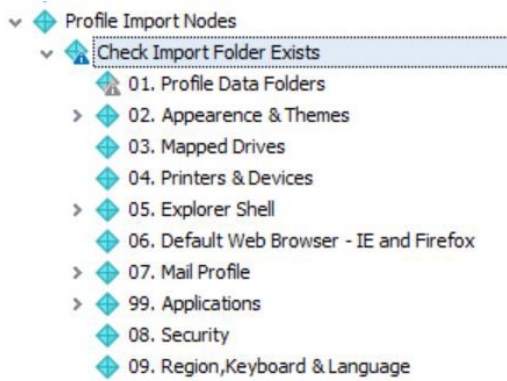

Action	Details
1	• Condition to ensure that the export options are only configured on Pre-Windows 10 Devices
2	• Ensure that the Import has not already been completed
3	• During processing the User will receive a message to indicate that a Migration Import is underway

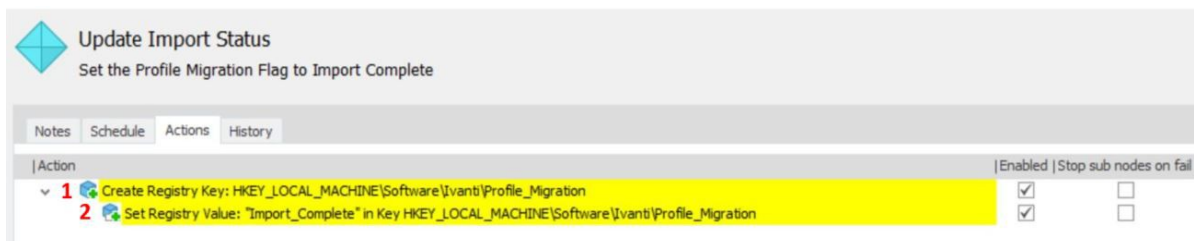**Run Profile Import at Logon | Profile Import Nodes**

This node will run a series of Import actions to ensure that all settings that were migrated for your user prior to Windows 10 migration, are available at logon. These actions are a reverse version of the Export Nodes (Move File/Registry data from Network share to local profile).

This will only require modification should you wish to either add new application/settings to the migration, or should you wish to remove some applications/settings. In the later section we will outline how to successfully add application settings to the Migration policy.

Action	Details
1	• Check that the MigrationDataPath folder exists for the user before attempting the import. • All Profile import sub-nodes will run in parallel to minimize User delay. ˅ ◆ Profile Import Nodes ˅ ◆ Check Import Folder Exists ◆ 01. Profile Data Folders > ◆ 02. Appearance & Themes ◆ 03. Mapped Drives ◆ 04. Printers & Devices > ◆ 05. Explorer Shell ◆ 06. Default Web Browser - IE and Firefox > ◆ 07. Mail Profile > ◆ 99. Applications ◆ 08. Security ◆ 09. Region,Keyboard & Language

Run Profile Import at Logon | Profile Import Nodes | Update Import Status

To ensure that the Import process only runs 'One Time' at Logon, we set the Profile Migration status to Import Complete. This will only run if the Parent actions have completed successfully.

Process Trigger

Process Trigger Nodes are utilised to execute specific actions only when the listed process is either started or stopped. In this case, our migration actions are triggered via 2 specific cmd lines:

- Migrate.exe -export
- Migrate.exe -import

In the following, we will outline the workflow that will be initiated within this trigger.

Process Start

Migration – Export

In the image below, the shaded left-hand section outlines how the export is performed.

Action	Details
1	• The process start workflow for migrate.exe -export performs 2 basic checks to ensure that the Device is not already at Windows 10 & that the process executed is *migrate.exe - export*
2	• Should the process *migrate.exe -export* be executed during the user's session a simple message will be displayed to indicate that an export is underway. The *migrate.exe -export* command could be initiated via the logon action listed in 4.2.2, via User Self Service or remotely by an Administrator

Migration – Export | Set Migration Path and Reset Status

Action	Details
1	• Should the users Migration Folder not already exist we will create prior to starting the profile migration
2	• Ensure that all previously written Profile export status flags are reset to ensure that we correctly track the status. Also write the current User and Migration Data path to the registry. • This ensures that IT can track exactly who is running the migration and also access the migration location should troubleshooting be required.

Migration – Export | Set Migration Path and Reset Status | Export User Data/App Settings/Export Win Settings

All the Data/App/Windows settings that the policy exports will follow the same workflow, rather than run through the similar process repeatedly, we will provide an overview of the logic used here:

Action	Details
1	• Set the Status to "In Progress" and write the current date/time to the registry
2	• Run all subsequent Folder/File/Registry export actions that are enabled within the Re-Usable node. Within the configuration these nodes are named: o Profile Export Nodes App Settings o Profile Export Nodes Data o Profile Export Nodes Windows Settings
3	• After completion, update the Status to "Complete" and write current date/time to the registry

To guard against unexpected behavior within the policy, relevant actions have the "Stop sub nodes on fail" option set. You may find that certain copy actions may legitimately fail (example, the application setting may not exist), in those cases you could disable this option on that action.

Migration – Import

Although a 'one time' migration import will automatically take place during 1st logon to the Windows 10 device, if the import needs to re-apply it is possible for the Administrator to run the *migrate.exe* with the *-import* parameter. This will re-run the Profile Import 're-usable' node and update the import status within the registry at completion.

Process Stop

Migration (import/export) finished

Each time that the migrate.exe process has completed, we will (if EPM installed) send a command to the EPM agent to run an inventory update. This is required so that the Registry flags are synced back to EPM, this ensures that the Xtraction dashboard is always updated. Should you not be using the full migration package, this section could be disabled.

Logoff Trigger

At logoff, on non-Windows 10 Devices we will always attempt to update the users Migration folder with the latest information. The data copy actions will only write New files and will not re-copy the folder in its entirety. The process is initiated be simply running the migrate.exe -export cmd.

Appendix

FAQ

Q: **How do I add a new Application to the current configuration?**

A: Once you have located which Folders/Registry are required for migration, within both the *Profile Export Nodes App Settings* and *Profile Import* Re-Usable Nodes there is a disabled node named *Example App.* This contains the basic actions required and can be copied to a new node (keep the Example App disabled).

The Administrator will need to update both actions within the Export/Import nodes to ensure that the Application settings are correct for the intended use.
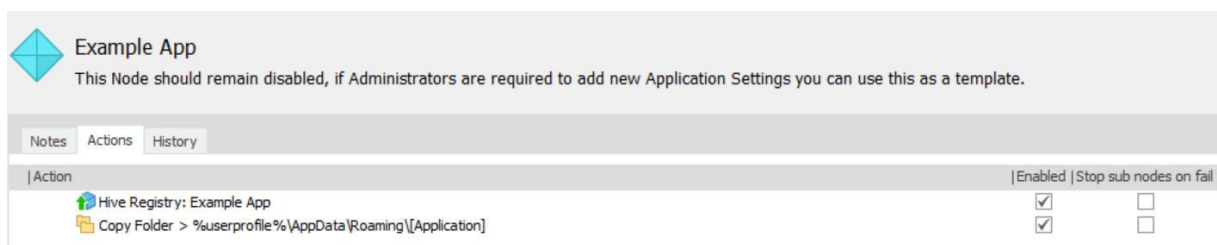
Q: **How do I remove some of the OOB settings not require in my environment?**

A: Any of the configured nodes/actions can be disabled as needed, however if you disable an export option (eg: Printers & Devices) you must also disable the associated import action.

Q: **How do I obtain a complete list of all operations that are carried out by this policy?**

Run a Configuration Profiler report from within the console, this can be exported to PDF.

Q: **How do I exclude a specific folder or file extension from the migration process?**

A: If you have the requirement to exclude specific folders or file types from a migration action, you will need to amend the relevant action and update within the area below:
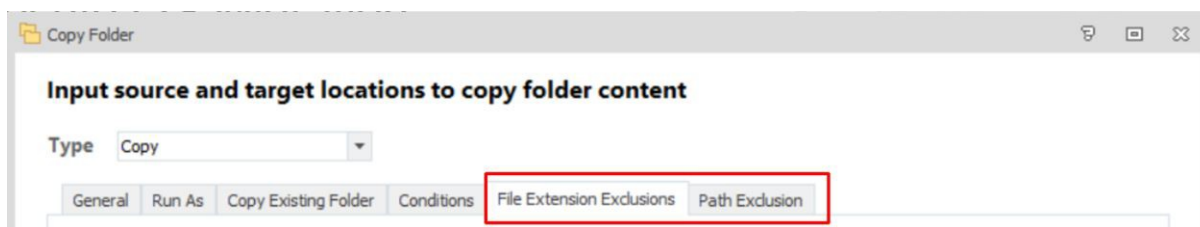
Migration Registry Flag Settings

This configuration utilises the registry to track the user migration status, during an EPM inventory scan, these settings are synchronised to ensure that Xtraction displays the latest status.

If using the policy independently of EPM and Xtraction, you can also leverage these same Registry settings to track your user migrations. The settings are listed below:

All entries below are within the following parent key:

HKLM\Software\Ivanti\Profile_Migration

Key/Value	Description
Export_Complete	Written only when all sections of the User Profile Migration export have completed successfully
Export_Trigger	Contains the configured option for when an export will take place
Import_Complete	Set once the first-time user import has occurred, will have the value: • Complete
Migration_User	Current user who is being migrated
Migration_Path	Location to be used during import/export, any errors encountered during the migration are written to a log file at the root of this folder
User_Data\Start_DateTime	Timestamp when User Data export started
User_Data\End_DateTime	Timestamp when User Data export finished (no entry indicates an error)
User_Data\Status	Final Status of the last User Data export, this will be either: • In Progress • Complete
Windows_Settings\Start_DateTime	Timestamp when Windows Settings export started
Windows_Settings\End_DateTime	Timestamp when Windows Settings export finished (no entry indicates an error)
Windows_Settings\Status	Final Status of the last Windows Settings export, this will be either: • In Progress • Complete
Application_Settings\Start_DateTime	Timestamp when Windows Settings export started
Application_Settings\End_DateTime	Timestamp when Windows Settings export finished (no entry indicates an error)
Application_Settings\Status	Final Status of the last Windows Settings export, this will be either:

	• In Progress • Complete

Out of Box Profile Settings

User Profile	Settings
User Data	• User Documents • Desktop • Favorites • Contacts • Downloads • Links • Music • Pictures • Videos
Applications	• MS Office (2007-2016) • Internet Explorer • Adobe Reader/Acrobat/CS • Google Chrome • SnagIT • Notepad • Notepad++ • AccuRoute • Java • Winzip • WinRAR • Camtasia • Webex • VMware • AutoCad • Cisco Jabber • Bluezone • Visual Studio • 7Zip • Jasc Paint Shop Pro 9

	• Skype • Mozilla Firefox • GotoMeeting • Track-IT • OpenOffice • GlobalScape • ArcGIS • Beyond Compare • KeePass • PuTTY • Sticky Notes • Filezilla • Foxit • iTunes • SAP Gui
Windows Settings	• Appearance • Themes • Wallpaper • Drive Mappings • Printers (Default, Devices) • ODBC connections • Libraries • Control Panel View • Icon Positions • File Explorer Layout • Folder Views & Layout • Mouse • Taskbar • Run History • Default Browser • Mail Profile • Security (Certificates/Credentials) • Region Settings • Language / Keyboard

Configuration Revisions

Area	Description
Internet Explorer Import Node	Import Node moved to Desktop Created as the early hiving-in of this key was causing browser and other File Type associations to be reset.