

MICROSOFT SYSTEM CENTER CONFIGURATION MANAGER INTEGRATION GUIDE



**Migration Manager
for Windows**

TRANXITION

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Introduction

This document describes methods for integrating Tranxition™ Migration Manager (“TMM”) version 10 or higher can be integrated with Microsoft System Center Configuration Manager.

Audience

This document is intended for IT administrators using SCCM to deploy TMM services to client PCs and automating the extraction and injection of user profiles. It provides a technical overview of the integration of SCCM and TMM, and describes how to configure and use a SCCM infrastructure to deploy and manage TMM.

Prior Knowledge

The administrator using this guide should have previous knowledge of the following technologies:

- Microsoft System Center Configuration Manager (SCCM)
- Transition Migration Manager version 10 or later

Benefits of Integration

SCCM delivers a rich set of capabilities that enterprises utilize for managing desktop deployments.

Integrating Tranxition Migration Manager and SCCM delivers the following benefits:

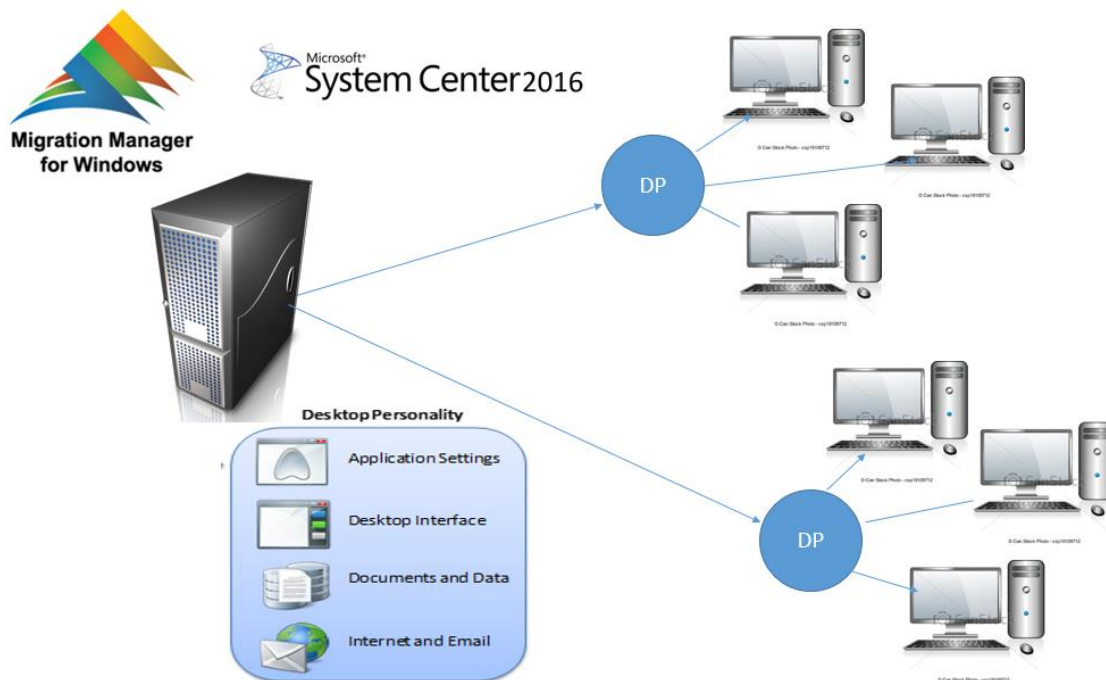
- Performance – TMM operates at up to five times the speed of USMT in a lab environment
- Reliability – Customers report low failure rates during state migration with TMM
- Cost – As a commercial product, TMM is directly supported and has a much lower operating cost than USMT even when initial license costs are factored in
- Infrastructure – organizations using both SCCM and TMM can scale TMM to support all deployment operations necessary in an “enterprise” environment.
- Scalability – Users can leverage SCCM Distribution Points for hosting the TMM data store, thus removing the need to deploy and maintain a separate TMM data store.
- Security – Maintaining security with TMM is simpler using SCCM infrastructure
- Automated User Backups – With the integration with Configuration Manager, TMM can backup user state data on a routine basis, providing user state snapshots automatically through the use of SCCM collections and advertisements.
- Process Management – Using SCCM and TMM together enables effective deployment processes

- Deeper Migration – TMM supports conversion of data between application versions and more depth in migrating settings in many instances

TMM automates the backup, restoration, and management of user state profiles offering several capabilities not available within USMT, including:

- Graphical user interface for configuring user migration profiles, including advanced UI for managing files and registry rules
- Ability to convert legacy application settings to current version and migrate user profiles based on roles and business groupings
- Ability to migrate user states from, to, and between all versions of Windows 10, Windows 8, and Windows 7.

Through using this guide to integrate TMM with Configuration Manager, users will be able to automatically manage user profile backup, restores, and migrations with SCCM OSD and MDT.



Architecture Concepts

TMM provides a centralized, graphical, wizard-driven solution to automate user state profile migrations, backups, and restores. The solution architecture consists of a central data store or stores that maintain folders for each user personality managed. TMM can be configured and administered via the client console to manage user profile configurations and user state migration activities which can also be automated with command lines. The diagram below illustrates the basic architecture of the TMM solution.

For more details on the TMM architecture and automating processes with command line options please see the TMM [User Guide](#) and TMM [Automation Guide](#) listed in the references section at the end of this guide.

The TMM solution is readily integrated with SCCM to augment and/or replace USMT. It provides more robust user state management capabilities. When planning to integrate TMM with SCCM, a few considerations should be taken to prepare:

1. Will we have a single TMM data store for business or many?
2. Should the data store be a dedicated resource or an existing SCCM resource?
3. How many unique user state configuration files will we need to create to support the various profiles?
4. Should we allow users to access the TMM client from their desktop?
5. Do we want to extract/backup all local user state profiles, only the logged in user, or only ones that have been used? Do we want to exclude any users?
6. Do we need to password protect the personalities within the Data Store(s)?

Note that while it's possible to deploy TMM to each individual desktop, it is not necessary to do so. Instead TMM can be run from a central location (or locations depending on network architecture) – this is the recommended approach.

Once these questions and the general design have been planned out TMM can be configured to perform tasks around user state migration and backup. While all of this is accomplished with standard SCCM packages, collections, and advertisements, the TMM Data Store(s) do need to be set up in advance and at least one user state migration template must be created. The number of Data Stores directly impacts the complexity of automating user state migration but does enable support

for a broad range of SCCM configuration scenarios. The diagram below shows a basic SCCM architecture with a single TMM Data Store.

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Getting Started

This section provides instructions for preparing the TMM environment in preparation for the SCCM integration.

Prerequisites

The following assets and preparation are required to successfully integrate TMM with SCCM, they include:

1. TMM software
2. Sufficient privileges to install software and create/access Data Store

Preparing the TMM Environment

To prepare TMM for integration with SCCM there are three primary steps that need to be completed.

1. Install TMM
2. Create Data Store(s)
3. Create User State Migration Templates

Installing TMM

The TMM User's Guide provides detailed instructions for how to install TMM. Typically you will only need to install TMM once in a central location, although in a distributed network environment it may be necessary to have a central installation of TMM in each major site in order to conserve network capacity between the sites.

Create Data Store(s)

The TMM installer creates the central location where user state data and configuration information will be stored. The account performing file backups or personality restores must have full access to the Data Store shared folder (and NTFS permissions). If TMM is launched and managed through an SCCM service account, that account and possibly 'Domain Computers' will need these rights.

The user account used by SCCM to run TMM needs read and write access to the file share where the user state data is stored. This is the only account that needs to be given access to the file share.

Configuring User State Migration Templates

TMM uses a configuration file to control the following aspects of a migration operation:

- Applications to migrate settings and data for
- File and registry rules to use for the migration
- General application behavior (logging, file overwrite rules, etc.)

This information is explained in detail in the *Tranxition Migration Manager User's Guide*. Please refer to that document for more detailed information. It is included with the software.

For large migrations it's quite likely that multiple, different, configuration files will be necessary depending on the computers and users being targeted for the migration (for instance, different migration settings may be necessary for users in the HR department compared to users in the Accounting department).

The configuration files should be saved in the same central location where TMM is installed so they can be referenced using the /CONFIG command-line parameter. If only the default named Configuration.xml is being used, the /CONFIG command-line parameter may be omitted.

Extracting User State

Overview

Extracting user state from a system is the process of reading all settings and data associated with a user from a particular system (the corresponding step to USMT's scanstate.exe process). Since there is no need to install TMM on each system that should be extracted, there is no need to create a software distribution package for TMM – a simple Task Sequence can be used instead.

Creating the Task Sequence

With TMM already installed in a central location, all that's required to automate the process of extracting user state is a Task Sequence that runs TMM.

It's also possible to add the user state extraction as an action in an existing Task Sequence instead of creating a new Task Sequence if there is more work being done on the source systems than just doing the user state extraction.

TMM Command Line

The full syntax for the command line parameters supported by TMM is described in *the Automating Tranxition Migration Manager* guide. Please refer to that for the complete details of the parameters used for user state extraction.

A minimal command line for doing an automated user state extraction with TMM looks something like this (all on one line):

```
\\myserver\MigrationManager\migrationmanager.exe /autoextract /allusers
```

In the above example, it's assumed that TMM has been installed on a server named "MyServer" and a file share has been created with the name "MigrationManager". As the /CONFIG and /DATASTORE are omitted in this example, the default configuration file "Configuration.xml" and data store location set in the configuration file contains the URL to the default location "~~WWW~~myserver~~WM~~MigrationManager~~W~~DataStore" within the TMM shared folder.

Optionally the command line parameters /CONFIG and /DATASTORE can be used. Be sure to specify the full UNC path with these command lines and that the SCCM account or service has full access to those shares (and NTFS permissions) in addition to the TMM installation location (in this example, "~~WWW~~myserver~~WM~~MigrationManager").

If the local SYSTEM is running the TMM task, then "domain computers" may need to have access to these shares. Alternatively, a task can be added to access the share before the task to run TMM. This can be accomplished by adding "Connect to Network Folder" from Add | General. In the task sequence step, map the share to a drive letter and set the Account to an account with full access to the shared folder. Then use the drive letter in-place of UNC paths in the command line task for running TMM.

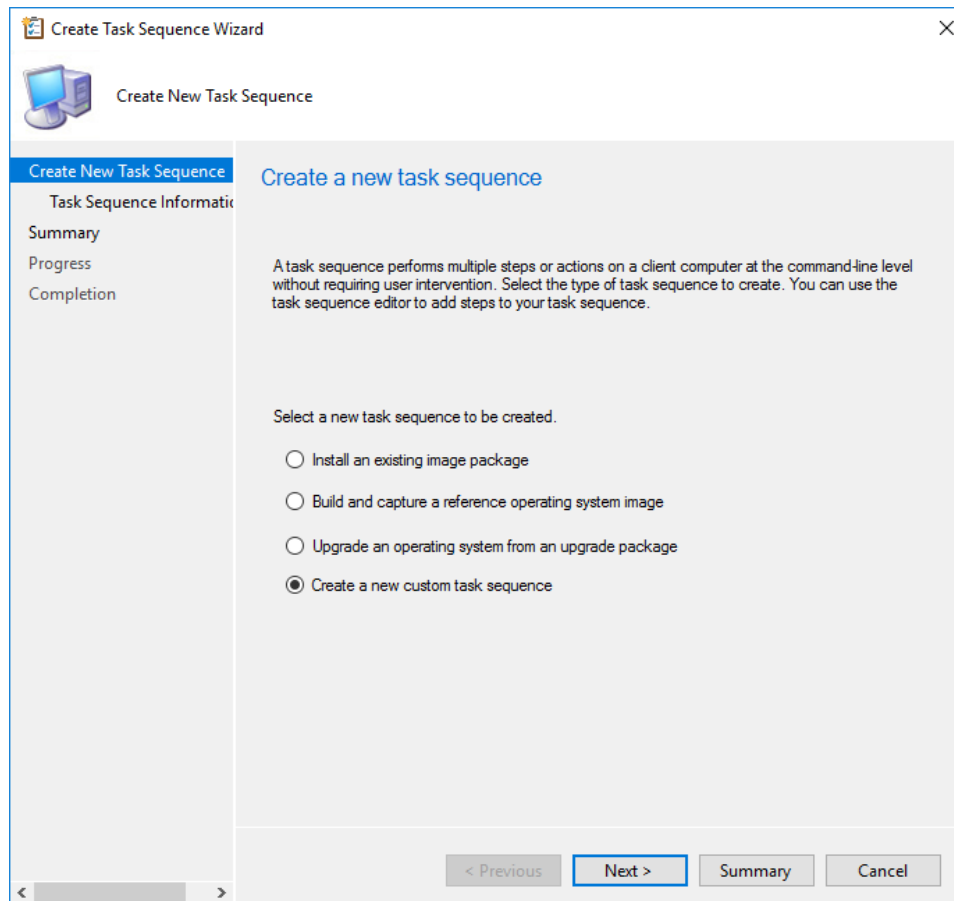
Parameter	Description
/autoextract	Perform a user state extraction
/config <path>	The absolute path of the configuration file that should be used for the extraction (Optional)
/datastore <path>	The absolute path of the location where the extracted user state data should be stored (Optional)
/allusers	Extract the user state data for all user profiles on the system

SCCM Console Steps

1. Start the SCCM console
2. Expand "Software Library | Operating Systems | Task Sequences"
3. Click "Create Task Sequence" in the Action pane

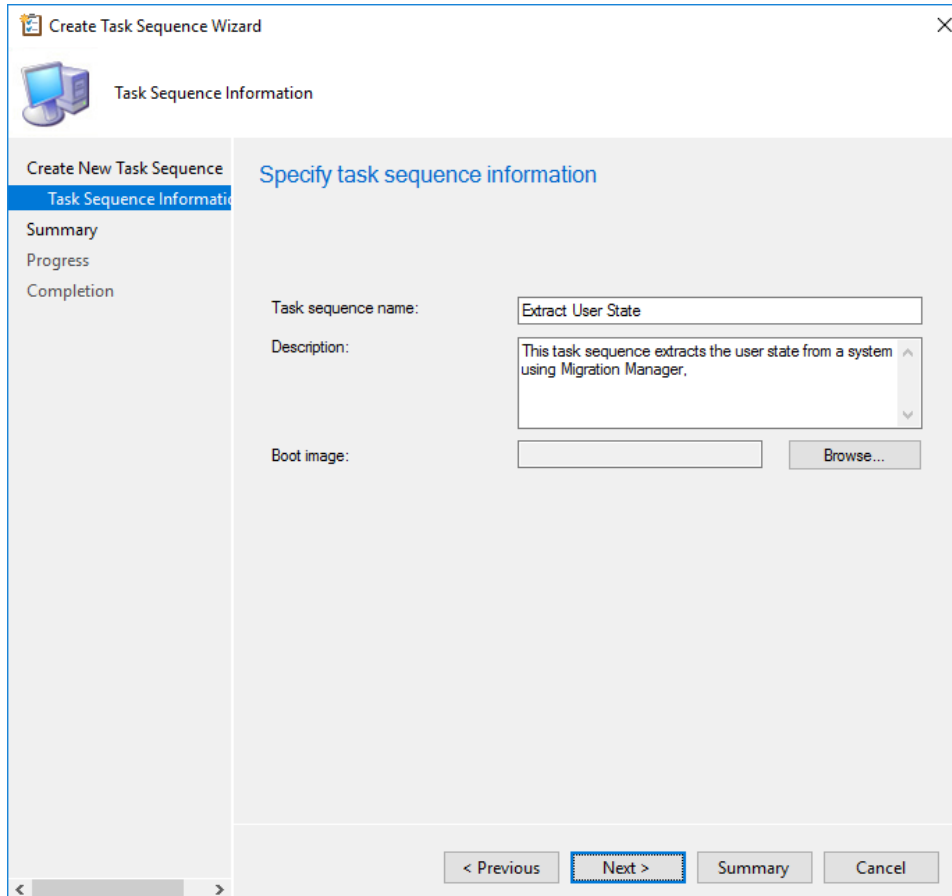
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4. Select "Create a new custom task sequence"



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5. Click "Next" and specify a name of the task sequence (and optionally a Description)



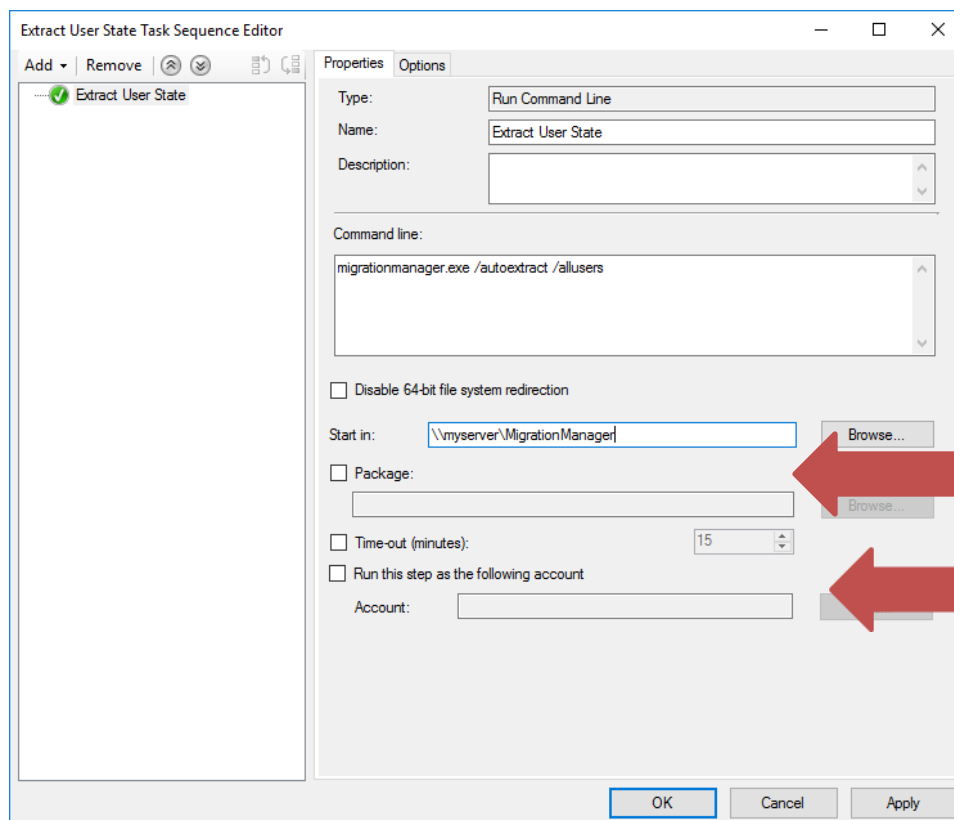
The screenshot shows the 'Create Task Sequence Wizard' dialog box, specifically the 'Task Sequence Information' step. The window title is 'Create Task Sequence Wizard'. The left sidebar shows the wizard steps: 'Create New Task Sequence', 'Task Sequence Information' (selected), 'Summary', 'Progress', and 'Completion'. The main area is titled 'Specify task sequence information' and contains the following fields:

- Task sequence name:** A text box containing 'Extract User State'.
- Description:** A text area containing 'This task sequence extracts the user state from a system using Migration Manager.'
- Boot image:** A text box with a 'Browse...' button next to it.

At the bottom of the dialog, there are four buttons: '< Previous', 'Next >' (highlighted with a blue border), 'Summary', and 'Cancel'.

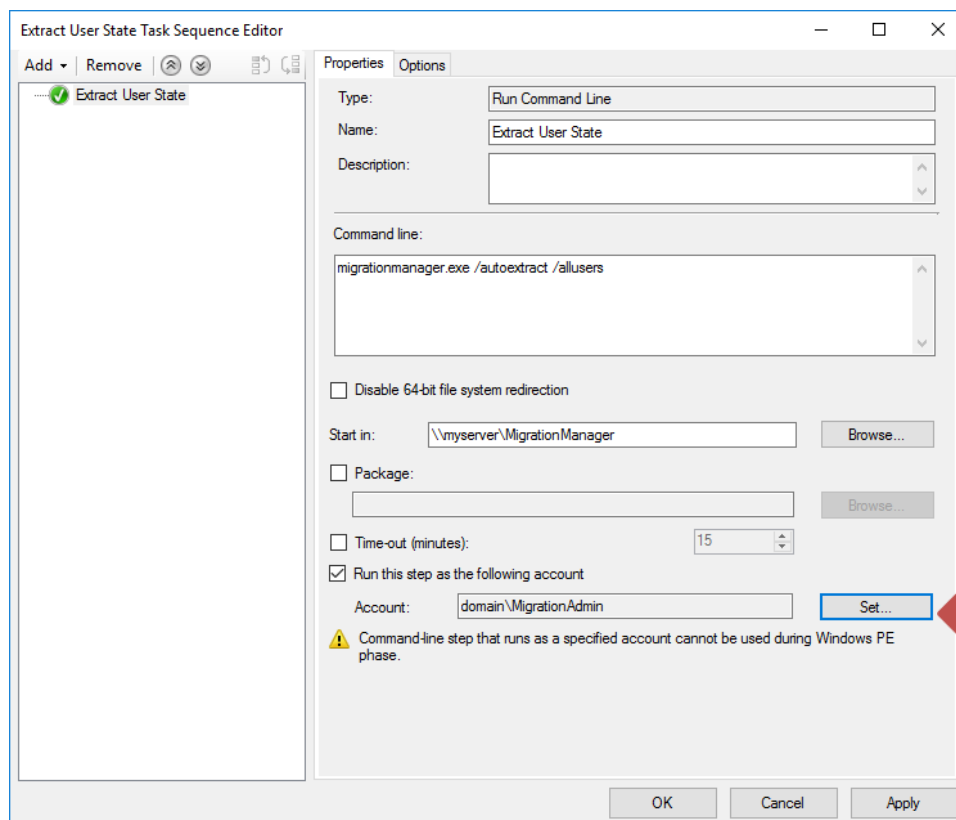
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6. Click "Next" and then complete the wizard
7. Back in the console window, right click the new Task Sequence and select "Edit"
8. Click Add | General | Run Command Line
9. Enter the name of the action (e.g. "Extract user state") and optionally a description
10. Enter the TMM command line (note that the paths will be different depending on where TMM is installed). The path to "MigrationManager.exe" can either be specified in the command line, or under "Start in" as shown below.



Enable "Run this step as the following account" and specify the account to run TMM. Typically, an administrator account is created for the migration process, but this can be any account that has full access to the TMM installation share (such as:

“myserver/MigrationManager”) and any additional shares (such as /Config, /Datastore) that may be setup in addition to local administrator rights on the source and target systems. If it is desired not to specify an account to run the step, then the local SYSTEM account will be used and will need access to the share(s) by adding share (and NTFS) permissions for “Domain Computers”. Alternatively, a task sequence to map a drive to the shared folders can also be used by adding a task “Add | General | Connect to Network Folder” prior to Extract User State command line task.



11. Click “OK” to save the changes to the Task Sequence

Advertising the Task Sequence

Once the Task Sequence has been created, it should be advertised to the computers that are the source systems for the migration causing TMM to extract the user state from those systems. The exact steps for how to create the appropriate Collections to target the source systems is beyond the scope of this document.

Monitoring the Progress of User State Extraction

The following list summarizes some of the resources and methods available for monitoring the status of the user state extractions:

Review Advertisement Status Messages for the Agent Installation, Personality Extraction and Backup jobs. Identify any failures

Review the report "Status of a specific advertisement"

For failed user personality extraction jobs:

- Confirm personality extraction process generates success/failure status messages
- Create status filter query to email technician when personality extraction process fails
- For additional logging information on the local source machine, review the TMM session log (located C:\ProgramData\Tranxition\TMM on Windows 7 and later). Each time a job is run, a separate session log entry is created providing performed during the extraction. Please refer to the TMM User's Guide for more information on the log files created by TMM information about the job, including the exit code of the job. Also, within the personality folder of the data source, a log is also created showing the operations

Injecting User State

Overview

The most common scenario for integrating TMM with SCCM is to use it as part of an Operating System Deployment. The TMM action(s) can easily be added to any existing Task Sequences.

Associating Source and Target Computers

This example makes use of a variable (named MMSOURCE in the sample script described below) defined on the target systems to define the name of the source system. Other methods are possible but not addressed in this document.

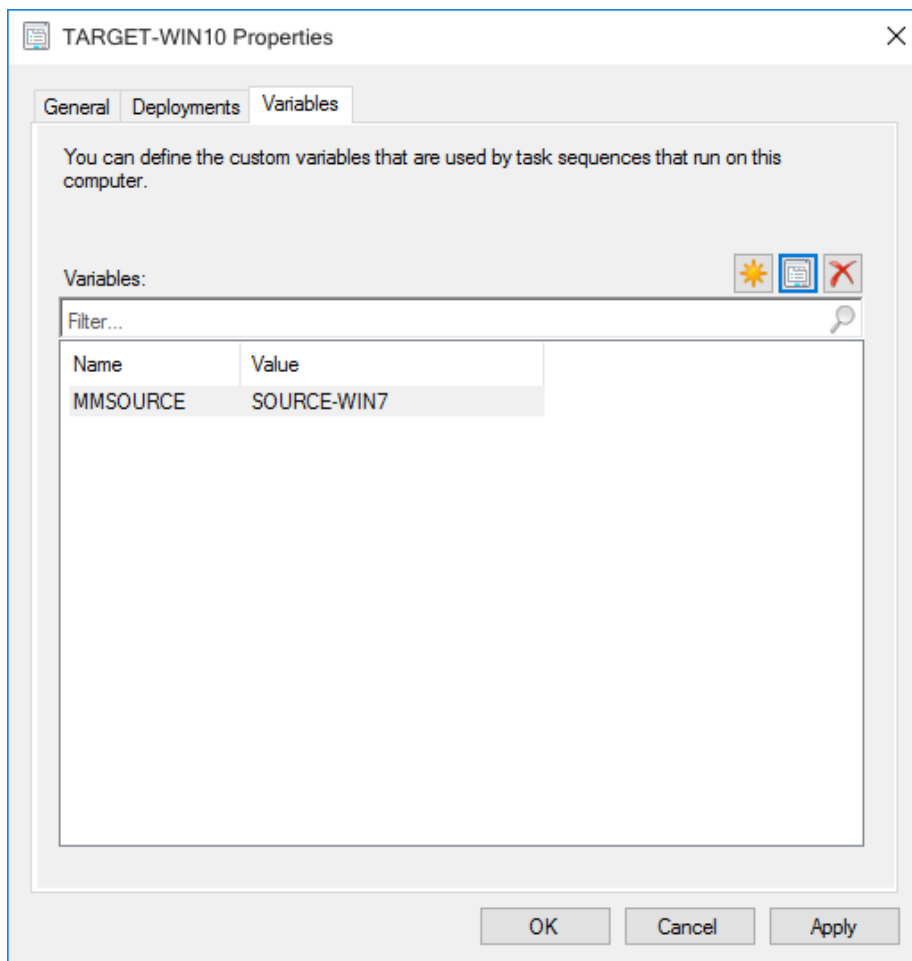
The variable can be defined as part of creating the target system in SCCM by extending the process currently used. For example, if importing computer information from a CSV file, the variable assignment can be done as part of the import.

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Manually Defining the Target System Variable

To manually define the variable for a target system, follow these steps:

1. Locate the target system in the SCCM console, right-click it and select Properties
 1. On the Variables tab, enter the name and value of the variable:



2. Click OK to save the changes

Creating the Script Used to Inject User State

Since TMM needs the name of the source system when it injects user state to the target system, a VBScript script is needed to get the Task Sequence environment variable for use in the command line. This script should be stored on the file share where TMM is installed.

Sample Script

This sample script can be used as a template for the injection script. It will need to be adjusted for the specific environment for the path to TMM:

```
Dim sccmEnvironment      ' The Task Sequence environment variables
Dim sourceSystem         ' The name of the source system
Dim commandLine' The command line to run

Set sccmEnvironment = CreateObject( "Microsoft.SMS.TSEnvironment" )

' Get the name of the source system for this target system using the
' value of the MMSOURCE computer variable defined in SCCM.
sourceSystem = sccmEnvironment( "MMSOURCE" )

commandLine = "\\MyServer\MigrationManager\migrationmanager.exe /autoinject /allusers
/source " + sourceSystem

WScript.Echo "Command line: " + commandLine

Set WshShell = WScript.CreateObject("WScript.Shell")

result = WshShell.Run( commandLine , 1, true )

WScript.Quit result
```

Running the Injection Script

Once the injection script has been created and deployed, running the script can either be added as a new action in an existing Task Sequence (e.g. included in an existing Operating System Deployment Task Sequence) or included in a new Task Sequence depending on the environment and any other needs.

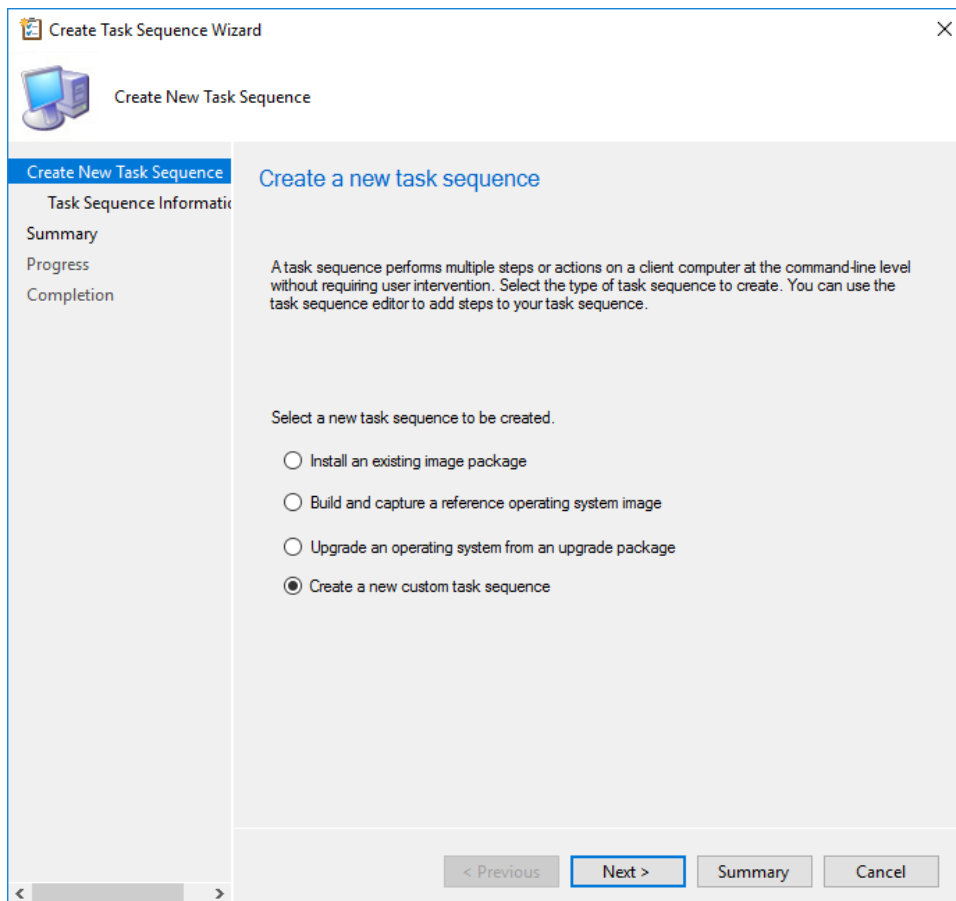
The steps to create the action are much the same regardless of whether a new Task Sequence is being created or an action is being added to an existing Task Sequence. The steps below creates a new Task Sequence.

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Creating a New Task Sequence

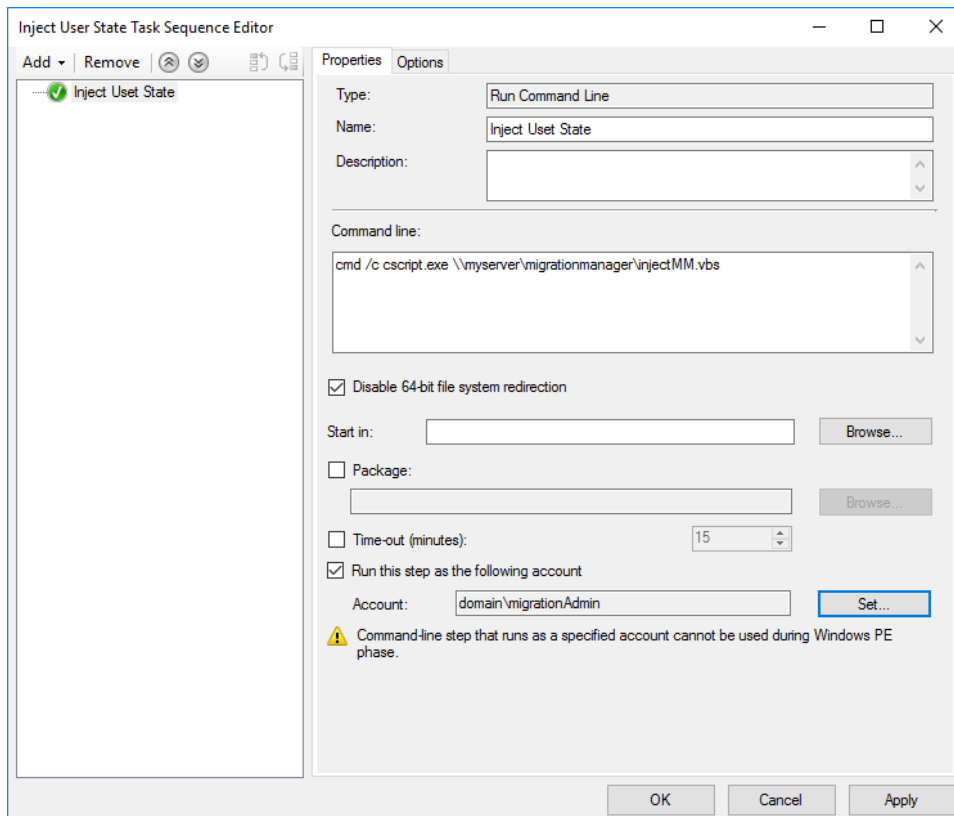
To create a new Task Sequence, follow these steps:

1. Start the SCCM console and navigate to "Software Library | Operating Systems | Task Sequences"
2. Right-click Task Sequences and select "Create Task Sequence" from the menu
3. In the New Task Sequence wizard, select "Create a new custom task sequence"



4. Click Next and enter the name and optional comment for the Task Sequence

5. Click Next to create the Task Sequence and when the wizard has completed, click Close
6. In the list of Task Sequences, right-click the new Task Sequence and select Edit
7. In the Task Sequence Editor, click Add | General | Run Command Line
8. Enter the name of the action (e.g. Inject User State)
9. In the command-line field, enter the command to run the injection script created above:



Note that the UNC path for the file share where TMM is installed will need to be adjusted depending on the environment. If the task is to be run as a specific user as discussed when creating the extraction task, enable the setting and add that user to: "Run this step as the following account".

10. Click OK to save the changes to the Task Sequence.

The Task Sequence is now ready to be used.

Additional Information

Overview

This document provides a basic introduction to the capabilities of TMM with the focus being on how to use TMM with Configuration Manager. For more detailed information the capabilities of TMM, additional documentation is available.

Automating TMM

This guide, included with TMM and also available on the Tranxition website at <https://tranxition.com/documentation/mm-automation-guide/>, provides complete documentation of the command line parameters supported by TMM. This document also describes all of the exit codes used by TMM to communicate errors in automation scenarios.

TMM User's Guide

This guide, also included with TMM and available on the Tranxition website at <https://tranxition.com/documentation/mm-users-guide/>, documents all of the features of TMM including the user interface. The chapter describing the log files generated by TMM may be of particular interest to help troubleshoot any failed migrations.

Intellectual Property Information

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