# Managing Windows-based Dell Wyse and OptiPlex Thin Clients using Microsoft Endpoint Configuration Manager

Administrator's Guide



### Notes, cautions, and warnings

(i) NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

MARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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# Introduction

Microsoft Endpoint Configuration Manager is a system management software by Microsoft to manage large groups of Windowsbased computers. Dell Wyse supports SCCM 2012 R2, SCCM 2016, and SCCM 2019 to manage thin clients that run the following operating systems:

- Windows 10 IoT Enterprise
- Windows Embedded 8 Standard
- Windows Embedded Standard 7 Enterprise
- Windows Embedded Standard 7P

### **Topics:**

- About this guide
- Microsoft Endpoint Configuration Manager system requirements
- Microsoft Endpoint Configuration Manager features
- Microsoft Endpoint Configuration Manager prerequisites

### About this guide

This guide is intended for administrators and system engineers who work on Microsoft Endpoint Configuration Manager.

This guide contains the following information:

- Features that are supported on the Dell Wyse Enhanced Windows Embedded builds
- Managing software on Dell Wyse thin clients
- Imaging and deploying operating systems on Dell Wyse thin clients

For more information about Microsoft Endpoint Configuration Manager and Windows Embedded operating system, see *System Center Developer Documentation Library* at https://msdn.microsoft.com.

# Microsoft Endpoint Configuration Manager system requirements

Additional storage space for the installation of Microsoft quick fix engineering (QFEs) on the thin client is the minimum system requirement.

## Microsoft Endpoint Configuration Manager features

The main features of Microsoft Endpoint Configuration Manager are the following:

- Asset discovery
- Asset inventory
- Image capture
- Image deployment
- Software package advertisement with write filter management

# Microsoft Endpoint Configuration Manager prerequisites

Before working on Microsoft Endpoint Configuration Manager, you must configure the following:

- Active Directory (AD)—You must create an AD to add a set of thin clients.
- Dynamic Host Configuration Protocol (DHCP)—You need to configure DHCP that hosts the IP that you have created.
- Domain Name System (DNS)—DNS helps in creating a unique IP which is the domain IP.
- Windows Deployment Services (WDS)—If enabled, WDS helps to deploy any Windows-related updates.
- Windows Server Update Services (WSUS)—WSUS is also used to enable the Windows-related updates.
- Windows Assessment and Deployment Kit (Windows ADK 10)—This is a development kit and you must install this kit on the SCCM server.
- System Center Configuration Manager (version)—This is the console to access SCCM.

For more configuration settings, see Introduction to Application Management in Configuration Manager at https://technet.microsoft.com.

**NOTE:** For reference, SCCM 2016 and Windows 10 IoT Enterprise screenshots are used in this guide. However this guide can also be used for SCCM 2012 R2 or SCCM 2019.

# Imaging Dell Wyse thin clients with Microsoft Endpoint Configuration Manager

### **Topics:**

- Creating driver packages for imaging
- Preparing the operating system image for capturing
- Creating capture media task sequence
- Capturing Windows image from reference system

## Creating driver packages for imaging

Perform the following steps to create a driver package for imaging the thin client:

- 1. Click Start > All Programs > Microsoft System Center > Configuration Manager Console. The System Center Configuration Manger window is displayed.
- 2. Click Software Library.
- 3. Expand Overview > Operating Systems > Drivers, and right-click Import Driver.

Search		A
Scope Options Save	Search As Active Search	
A software Library     Software Library     Software Library     Cverviee     Conviee     Software Update     Software Update     Software Update     Software Update     Software Update     Software Update     Conviee     Conviee	Operating Systems     Operating Systems     Navigation Index     Margadevice drivers and device driver catalogs to deploy operating systems.     Operating System mage: Marage Windows image files for operating system deployment.     Boot Image: Marage Virtual Hard Disks:     Recent Alerts (0) - Last updated: 5/26/2017 4:52:41 PM	Driver Packages: Manage device driver packages. Operating System Upgrade Packages: Manage operating system upgrade packages Task Sequences: Manage task sequences that automate steps or tasks on client computers.
Assets and Compliance		

Figure 1. Import driver

The Import New Driver Wizard window is displayed.

4. On the Locate Driver page, do one of the following:

- If you want to import all the drivers from a network path, click **Import all drivers in the following path (UNC)**, browse to the folder, and then click **Select Folder**.
- If you want to import a specific driver from a network path, click the **Import a specific driver by specifying the network path (UNC) to its .inf or txtsetup.oem file** radio button, browse to the specific driver, and click **Open**.

Import New Driver Wizard		×
Locate Driver		
Locate Driver Driver Details Add Driver to Packages Add Driver to Boot Image Summary Progress	Specify a location to import driver This wizard allows you to import one or more drivers. You can let Configuration Manager find all drivers in the given network path or specify a specific driver to import. () Import all drivers in the following network path (UNC)	_
Completion	Source folder:         \\	
	Source: Browse Specify the option for duplicate drivers	
	Import the driver and append a new category to the existing categories $$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	
< >	< Previous Next > Summary Cancel	

Figure 2. Locate driver

(i) **NOTE:** The driver must be available in the local share path of SCCM.

- 5. Select the option for duplicate drivers from the Specify the option for duplicate drivers drop-down list.
- 6. Click Next.
- 7. On the Driver Details page, select the drivers you want to import.

Import New Driver Wizard						×
Driver Details						
Locate Driver Driver Details	Specify the details for the	importe	ed driver			
Add Driver to Packages Add Driver to Boot Image Summary	The following drivers will be imported fr \\\\\Share\LAN_Driver\	om folder:				
Progress	Hide drivers that are not in a storage	ne or netw	ork class for boot	images)		
-	Hide drivers that are not digitally si			indgoo)		
Completion		gnea				
	Filter					P
	File Name	Class	Architecture	Version	Signed	^
	ver_Repo_WES7E\Z_ZDE	Net	x86	7.101.714	Yes	
	WIN7\64\rt64win7.inf	Net	x64	7.101.714	Yes	
	WIN7\WinPE\32\ws86win7	Net	x86	7.101.714	Yes	
	WIN7\WinPE\64\ws64win7	Net	x64	7.101.714	Yes	~
		Se	elect All	Cle	ear All	
	Enable these drivers and allow con Assign this driver to one or more categ				Categorie	95
< >	< Previ	ous	Next >		Ca	ancel

#### Figure 3. Driver details

- 8. If you want to install the selected drivers on your system, select **Enable these drivers and allow computers to install them** check box.
- 9. Click Next.
- **10.** On the **Add Driver to Packages** page, select **New Package**. The **Create Driver Package** window is displayed.
- 11. In the **Create Driver Package** window, enter the package name, and browse to the network UNC path where you want the Configuration Manager to store the drivers added to the package. Click **Ok**.

> Import N	New Driver Wiz		×
Locate Driv Driver D	er 🏭 Create Dri	Select the packages to add the imported driver	:
Add Dri Add Dri Summary Progress Completio	Specify the fo Name: Comment:	ollowing information for the new driver package.  MyNewPackage	n use
	Specify a net Path:	twock path (UNC) where Configuration Manager stores drivers added to this package.       \\SCCM1_share\Package       Example: \\servemame \sharename       OK	
<		< Previous Next > Summary	Cancel

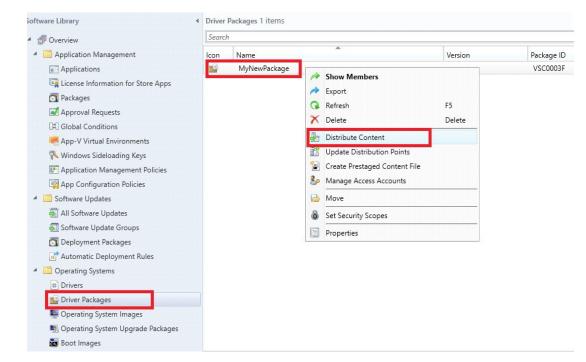
Figure 4. Create driver package

12. Select the packages to which you want to add the driver and click  $\ensuremath{\mathsf{Next}}.$ 

Import New Driver Wizard			8
Add Driver to Pac	kages		
Locate Driver Driver Details	Select the packages to	add the imported driver	
Add Driver to Packages Add Driver to Boot Image	Specify the package to add this d		
Summary	Drivers must be added to package them. Distribution points can be u	es and deployed to distribution point: pdated immediately.	s before computers can use
Progress Completion	It is recommended that you add a	I required drivers before updating the	e package.
	Name	Package ID	Select All
	MyNewPackage	VSC0003F	Clear All
			New Declarate
			New Package
<hr/>	< Pr	evious Next > S	ummary Cancel

Figure 5. Select the packages

- 13. On the Add Driver to Boot Images page retain the default options and click Next.
- 14. On the **Summary** page, verify the details, and click **Next**.
- **15.** After the configuration is complete, click **Close**.
- 16. Click Software Library.
- 17. Expand Overview > Operating System > Driver Packages.
- 18. Right-click the imported driver package, and select **Distribute Content**. The **Distribute Content wizard** window is displayed.



### Figure 6. Distribute content

#### **19.** On the **General** page, click **Next**.

Distribute Content Wizar           General	d
General Content Destination Summary Progress Completion	Review selected content         You have selected the following content for distribution.         Content:
	Some content might have associated dependencies that must be installed before the content can be installed.  Detect associated content dependencies and add them to this distribution
	Vetect associated content dependencies and add them to this distribution        < Previous

### Figure 7. Review selected content

20. On the Content Destination page, click Add, and then select Distribution Point from the drop-down list.

E Distribute Content Wizar				×
General Content Destination Summary Progress Completion	Content will be dist	intent destination ibuted to the following distribution oups that are currently associate	on points, distribution point g ad with collections.	roups, and the
	Content destination Filter Name	Description There are no items to show in t	Associations	Add  Collections Distribution Point Distribution Point Group
		< Previous	Next > Summa	ary Cancel

Figure 8. Content destination

The Add Distribution Points window is displayed.

21. Select the available distribution points, and click Ok. On the Content Destination page, click Next.

Distribute C	ontent Wizard ntent Destination	×
General Content Des Summary Progress	Add Distribution Points X Select distribution points that will host this content. Software Update Packages are never distributed to Cloud Distribution Points.	
Completion	Available distribution points: Filter  Filter  Add  Add  Remove	
	OK Cancel	
	< Previous Next > Summary: Cancel	

### Figure 9. Add distribution points

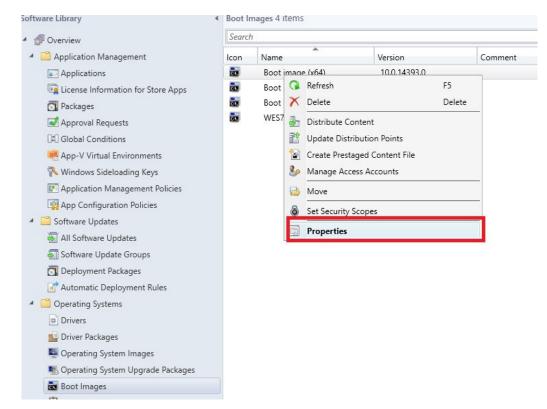
**NOTE:** SCCM uses distribution points to store files needed for packages to run on client computers. These distribution points function as distribution centers for the files used by the package and enable you to download and run files, programs, and scripts when a package is advertised.

- 22. On the Summary page, verify the details, and click Next.
- 23. After the configuration is complete, click **Close**.
- 24. Refresh the Driver Packages screen, and ensure that the Success message is displayed on the Content Status page.



#### Figure 10. Content status

- 25. Click Software Library.
- 26. Expand Overview > Operating System > Boot Images.
- 27. Right-click the appropriate boot image, and select **Properties**.





28. In the Properties window, select Drivers, and add the relevant client driver.

29. Click Apply, and then click Yes.

30. Right-click the appropriate boot image, and select Update Distribution Points.

31. In the Update Distribution Points page, click Next and then click Close.

32. Refresh the Boot Images window, and ensure that the Success message is displayed on the Content Status page.

### Preparing the operating system image for capturing

This section describes how to prepare an operating system image to capture, import, and deploy to the supported Wyse thin clients running Windows 10 IoT Enterprise operating system in a Configuration Manager environment. The reference image must be captured as a Windows Imaging (WIM) format file.

**NOTE:** To prepare a reference Windows 10 IoT Enterprise image, Dell Technologies recommends that you start with a newly imaged thin client. Customize the build as required, and prepare the build for the Configuration Manager image capture.

- 1. Click Start > Log off, and hold the Shift key until the login window is displayed.
- 2. Log in as an administrator.

(i) NOTE: For Windows 10 IoT Enterprise image, the default user name is Admin, and the default password is DelICCCvdi.

**NOTE:** For Windows Embedded Standard 7P and Windows Embedded Standard 7 image, the default user name is **Administrator**, and the default password is **DelICCCvdi**.

- **3.** Double-click the green icon on the desktop to disable the write filter. The system restarts after the write filter is disabled.
- 4. Customize the drivers, application, wallpapers and so on.
- 5. Navigate to the C:\windows\setup folder, and run the Build\_Master.cmd file.

**NOTE:** For legacy scripts, run the WIE10\_ConfigMgr\_Capture.ps1 file as an administrator and for Powershell ported scripts, run Build\_Master.cmd.

6. Select Configmgr Sysprep and press Enter.

- 7. To run the complete script, restart the thin client.
- 8. To open the Services window, press Windows+R, and type services.msc in the Open field.
- 9. Press Enter.
- **10.** Ensure that the SMS Agent Host service is running. If the service is not active, right-click the service, and click **Start**. The image in the thin client is ready for capturing.

(i) NOTE: If you restart the thin client during capturing, all the Configuration Manager related customizations are reverted.

## Creating capture media task sequence

Capture media in the Configuration Manager allows you to capture an operating system image from a reference computer. To create a capture media task sequence, do the following:

1. Click Start > All Programs > Microsoft System Center > Configuration Manager Console

Software Library		<
Overview		
🕨 🧮 Application Manag	gemen	t
🕨 🚞 Software Updates		
🔺 📔 Operating Systems	5	
Drivers		
📑 Driver Packages		
🖳 Operating Syster	n Ima	ges
Operating System	n Upg	rade Packages
📷 Boot Images		
🖻 Task Sequences		Francisco de la composición de la composi Composición de la composición de la comp
📼 Virtual Hard Disk	. 2	Create Task Sequence
	2	Create Task Sequence Media
	÷	Import Task Sequence
		Folder

### Figure 12. Software library

The System Center Configuration Manger window is displayed.

- 2. Click Software Library
- 3. Expand Overview > Operating Systems > Task Sequences, and right-click Task Sequences.
- Select Create Task Sequence Media. The Create Task Sequence Media Wizard window is displayed.
- 5. Select the Capture Media radio button, and click Next.

elect Media Type Media Type	Select the type of media
Boot Image Summary Progress	Select the type of new media (CD, DVD, or USB flash drive) or the file used to deploy or capture an operating system.
Completion	Stand-alone media     Creates media used to deploy operating systems without network access.
	Bootable media     Creates media used to deploy operating systems using ConfigMgr infrastructure.     Capture media     Creates media used to capture an operating system deployment image from a reference compute
	Prestaged media Creates a file to be prestaged on a new hard drive that includes an operating system image.
	Select this checkbox to enable unattended operating system deployment. An unattended operating system deployment does not prompt for network configuration or optional task sequences.
	Allow unattended operating system deployment.

### Figure 13. Media type

- 6. On the **Media Type** page, select the media type which you want to use for capturing media.
  - To use a removable USB drive for the image deployment, select the **Removable USB drive** radio button, and from the drop-down list, select the drive.
  - To use a CD/DVD set for the image deployment, select the **CD/DVD set** radio button, and browse to the media file.

🔁 Create Task Sequence Me	dia Wizard		×
Media Type			
Select Media Type Media Type Boot Image	Specify the me	edia type	
Summary Progress	Specify whether the drive.	media for this image deployment will use CD/DVD media or removable USB	
Completion	O Removable USE	drive	
	Drive:	~	
	🗹 Format remov	rable USB drive (FAT32) and make bootable	
	CD/DVD set	-	٦
	Media size:	· · · · · · · · · · · · · · · · · · ·	
		and path where the output files will be written. If multiple pieces of media are note number will be appended to the name for each piece of media.	
	Media file:	\\ \SCCM1_share\Package\Win10is Browse	
		< Previous Next > Summary Cance	el

Figure 14. Create task sequence media wizard

- 7. Click Next.
- 8. On the **Boot Image** page, browse to the appropriate boot image and distribution point.

🔁 Create Task Sequence M	ledia Wizard				×
Boot Image					
Select Media Type Media Type	Select the boot in	nage for the me	dia		
Boot Image					
Summary	Specify the boot image the used to create the media	nat is run from the media 1.	a and the distributi	ion point to downloa	id the content
Progress					
Completion	Boot image:	Boot image (x6	4)		Browse
	Distribution point:	and second second	.COM		Browse
	Distribution point.		.0011		biomac
		< Previous	Next >	Summary	Cancel

### Figure 15. Boot image

(i) **NOTE:** You must include Ethernet/ SFP driver in the boot image. You can contact the Dell Wyse support team for the respective driver.

- 9. Click Next.
- **10.** On the **Summary** page, verify the details, and click **Next**. The captured media or ISO is created.
- 11. After the installation is complete, click Close.
- **12.** Extract and copy the ISO to a removable USB drive.

### Capturing Windows image from reference system

To capture the Windows image from a reference system, do the following:

- 1. Plug in the prepared USB flash drive or CD/DVD to the reference thin client.
- 2. Open the USB pen drive or CD/DVD drive, and go to D:\SMS\Bin\i386.
- **3.** Run the D:\SMS\Bin\i386\TSMBAutoRun.exe file. The **Image Capture Wizard** is displayed.
- 4. On the Welcome to the Image Capture Wizard page, click Next.

💐 Image Capture Wizard	×
	Welcome to the Image Capture Wizard This wizard guides you through capturing a snapshot of one or more of the hard disk drives of this computer. Ensure that this machine is not a member of a domain and then dick next to continue.
	< Previous Next > Cancel

### Figure 16. Image capture wizard

5. On the Image Destination page, browse to any of the following:

- A shared location on the remote network—recommended
- A local USB drive path along with the .wim file name extension

	THE ALL			
Indicate where you w	vouid like the	operating system image	e to <mark>be created.</mark>	
Enter the destination	and file nam	e for the captured oper	ating system im	lage.
Destination:	W	\Win 10Image.w	im	Browse
	1	(		-
For network paths, en	nter the acco	unt and password used		ath.
For network paths, en <u>A</u> ccount Name:	nter the acco			
	nter the acco			ath.
Account Name:	nter the acco			ath.

### Figure 17. Image destination

- 6. Click Next.
- 7. On the Image Information page, click Next.
- 8. On the Summary page, click Finish.

The installer takes 5–10 minutes to start the capture process. During the capture process, the machine completes the Sysprep and boots into the Windows Preinstallation Environment. In the Windows Preinstallation Environment session, the

image is captured. After the image capture, the .wim file is generated and stored to the location specified in the **Capture Wizard** page.

### () NOTE:

After the image is captured, the reference thin client will not be in the same state as it was before the capture. To bring the reference thin client back to its original state, see msdn.microsoft.com/library/.

For a media creation standalone deployment, go to C:\Program Files (x86)\Microsoft Configuration Manager\AdminConsole\bin\i386, and open the command prompt. Run the command. For example:

CreateMedia.exe /K:full /p:"SCCM2016.cloud.com" /D:"SCCM2016.cloud.com" / S:"IND" /L:"FullMediaLabel" /A:"IND0004A" /K:"False" /T:"CD" /M:"44482" /F:"C: \deployment.iso" /X:"OSDComputerName=" /X:"OSTType=Enterprise"

# Deploying operating system image by using Operating Systems Deployment (OSD)

Configuration Manager provides two default boot images. Capture an image of the operating system that you want to deploy by using a task sequence. Distribute the boot image, operating system image, and any related content to a distribution point.

### **Topics:**

- Associating target thin clients with Configuration Manager server
- Importing a captured Windows reference image into Configuration Manager
- Creating task sequence to deploy Windows reference image
- Deploying Windows reference image

## Associating target thin clients with Configuration Manager server

To associate a target thin client with the Configuration Manager server, do the following:

- 1. Add the thin client to the domain.
- 2. Go to Control Panel > Configuration Manager > Site > Configuration Settings.
- 3. In the Configuration Manager service location section, enter the site code.
- 4. In the Actions tab, select either Machine Policy Retrieval and Evaluation Cycle or Policy Retrieval and Evaluation Cycle, and click Run Now.

### Configuration Manager Properties

General	Components	Actions	Site	Cache	Network	
Select a configu Actions Mach	an action to run red in the Confi	a client c guration M eval & Eva	ycle inde lanager aluation (	pendently console.		edules that are
					Ru	ın Now

### Figure 18. Configuration Manager Properties

The thin client is added to the Configuration Manager server.

- 5. On the Configuration Manager server side, go to Asset and Compliance > Device Collections.
- 6. Right-click Device Collection and select Create Device Collection.

×

Assets and Compliance	Device Collections 12 items
4 🍠 Overview	Search
🐁 Users	Icon Name
📭 Devices	All Desktop and Server Clients
🥩 User Collections	All Mobile Devices
💣 Device Collections	🖉 All Systems
🌜 User State Migrat 😵 Create Devic	ce Collection nknown Computers
Asset Intelligence Import Colle	
🗔 Software Meterin 🔚 Manage Dev	vice Categories spush
> 📑 Compliance Settin 🛛 Folder	•
Endpoint Protection	🤣 wie
All Corporate-owned Devices	WIE_Test
	WIENEW

### Figure 19. Create Device Collection

7. In the General page, enter the name of the collection, and from the Limiting collection drop-down list, select All Systems.

A Starting Dates	Specify details for	this collection		
1embership Rules ummary				
rogress	Name:	WIE10_1		
Completion	Comment:			0
		41.0		-
	imiting collection:	All Systems		Browse
	imiting collection:	All Systems		Browse
	imiting collection:	All Systems	Last membership ch	

### Figure 20. General

### 8. Click Next.

() NOTE: Add a rule when multiple clients are available. For more information about rules, see how to create collections in configuration manager in https://technet.microsoft.com.

Membership Rule	s					
General Membership Rules	Define membership	rules for this o	collection			
Summary Progress Completion	Membership rules determine the resources that are included in the collection when it updates. You can use membership rules to add a specific object or a set of objects from a query. The collection membership can also include or exclude other collections. Membership rules can add only those objects that are members of the limiting collection.					
	Membership rules: Rule Name	There are no item	Type is to show in this view.	Collection Id		
		s for this collection periodically evaluates ption does not require e on this collection	e you to schedule a full t PM	Edit Delete en adds resources that qualify update for this collection. Schedule ummary Cancel		

### Figure 21. Membership Rules

9. On the **Summary** page, click **Next**. The selected settings are applied.

Summary	
General Membership Rules	Confirm the settings
Summary Progress	Details:
Completion	General • Collection Name: WIE10_1 • Comment: To change these settings, click Previous. To apply the settings, click Next.
	< Previous Next > Summary Cancel

### Figure 22. Summary page

- 10. Click Close.
- 11. In the Devices list, right-click a device, and click Add Selected Items > Add Selected Items to Existing Device collection.

🕭 Overview	Search					
🔱 Users	lcon Name		Client Site Code	Client Activity	-	
🖳 Devices	15 Internet		Yes IND	Inactive		
💞 WIE10_1	15	244	Yes IND	Inactive		
💰 User Collections	15 Charles and a		Yes IND	Inactive		
Device Collections	1 🖏		Yes IND	Active		
Survey State Migration			No			
Asset Intelligence	SCCM2016		No			
Software Metering	😥 🛛 x86 Unknown Cor	mputer	No IND			
Compliance Settings	кб4 Unknown Cor		dd Selected Items			Add Selected Items to Existing Device Collection
Endpoint Protection		State of the local division of the local div	stall Client			Add Selected Items to New Device Collection
						Add Selected Items to New Device Collection
All Corporate-owned Devices			eassign Site			
		10000	lient Settings		•	
			art		F .	
			pprove			
		G BI	ock			
		🕑 U	nblock			
		a ci	hange Category			
		🗐 Ci	lear Required PXE Dep	oyments		
		B Ed	dit Primary Users			
		188 C	hange Ownership			
			elete	Delete		
		0.0	efresh	F5	-	
	x64 Unknown Comput					
	General Information	Pi	roperties			Client Activity



12. In the **Device Collections** window, select the device to add to the collection, and click **OK**.

Device Collections	Filter	
Root	Name Deploy27 Scc Wie WIE_Test Wie 10	Member Count 1 1 1 1 0 2 0
	WIENEW	1

### Figure 24. Select device collections

Store Overview	Searc	h				
🚨 Users	lcon	Name	Limiting Collection	Member Count	Members Visible on Site	Referenced Collectio
4 🛤 Devices	0	All Desktop and Server Clients	All Systems	4	4	0
WIE10_1	0	All Mobile Devices	All Systems	0	0	0
💰 User Collections	0	All Systems		8	8	0
Device Collections	0	All Unknown Computers	All Systems	2	2	0
Subser State Migration	0	Deploy27	All Systems	1	1	0
Asset Intelligence	ø	(An end of the second of the s	All Systems	1	1	0
Software Metering	ø	scc	All Systems	1	1	0
	0	interact, Record	All Systems	1	1	0
Compliance Settings	· · · · ·	wie	All Systems	0	0	0
Endpoint Protection	0	WIE_Test	All Systems	2	2	0
All Corporate-owned	Devices 🧬	wie10	jamespush	0	0	0
	0	WIE10_1	All Systems	1	1	0
	0	WIENEW	All Systems	1	1	0

### Figure 25. Device collections

In the **Asset and Compliance** section, click **Device Collections** and verify whether the device is added. The **Member count** is displayed as 1.

# Importing a captured Windows reference image into Configuration Manager

To import a captured Windows reference image into Configuration Manager, do the following:

- 1. Expand Software Library > Overview > Operating Systems.
- 2. Right-click Operating System Images, and click Add Operating System Image.

oftware Library <		Operat	ting System Images 19 items	
f Overview		Search	1	
4 🧮 Application Management		lcon	Name	Version
Applications		-	D90Q7P	1
icense Information for Sto	ore Apps	-	DISM_ZX0D_1	test
Packages			DXOD_7046	DEV
Approval Requests		-	_7046	1
Global Conditions		-	OS_ZXOD	
App-V Virtual Environment	's	-	testpull1	0A35
Windows Sideloading Keys		-	WES7_DQPOC2	1
		<u>.</u>	WES7_ZX0D7	1
Application Management F		-	WES7P_ 7000	1
App Configuration Policies		-	WES7P7048	1
📋 Software Updates			WES7	1
🧎 Operating Systems		1	WIE10_	1
Drivers			WIE10_	1
🔓 Driver Packages		-	WIE10_Test	1
System Image		41	Windows 10	2
Solution System Upg	Add Operating	System	Image erprise 2015 LTSB	1
Boot Images	Folder		<ul> <li>terprise 2015 LTSB</li> </ul>	1.0
		-	ZX0DE7_	1
Task Sequences		-	ZXOQ7P	7045
📼 Virtual Hard Disks				
Windows 10 Servicing				
😽 All Windows 10 Updates				

### Figure 26. Add operating system image

**3.** Enter the network path (UNC), and click **Next**.

ata Source	Browse to the data source for the operating system image
eneral	
ummary	
ogress ompletion	
ompietion	Specify the path to the operating system image file.
	specity the pair to the operating system image net.
	Path: Example: \\servername\sharename\path\file.WIM
	\\\ \Thin Client Image\Win10_Big.wim Browse.

### Figure 27. Data source

- 4. Enter the necessary information, and click Next.
- Verify the information that you have provided and click Next. The settings are applied.
- 6. Click Close.
- 7. Expand Software Library > Overview > Operating Systems, and select an operating system image.

- 8. Right-click Distribute Content, and click Next.
- 9. In the Content Destination section, add a Distribution Point.
- 10. Select your destination point, and click Next.
- 11. When the wizard installation is complete, click **Close**.
- 12. Refresh the **Operating System** screen. Ensure that the content status displays **Success** before proceeding to the next task.

# Creating task sequence to deploy Windows reference image

To create a task sequence, do the following:

- 1. Expand Software Library > Overview > Operating Systems.
- 2. Right-click Task Sequence, and click Create Task Sequence.

Overview	Search				
<ul> <li>Application Management</li> </ul>	lcon	Name	Description	Package ID	
Applications	1	DeployWES7P	ZXOQ7P Pass1 Build	IND00056	
License Information for Store Apps	<b>S</b>	Wes7_	7046 Image WES7	IND00035	
Packages	8	TESTWES7E_ZXOD		IND00033	
Approval Requests	1	Testing_		IND00059	
Global Conditions	1	TEST	TEST		
	8	Task Sequence_test		IND00062	
App-V Virtual Environments	8	Task Sequence 11		IND00025	
Nindows Sideloading Keys	1	Transfer 1		IND00023	
Application Management Policies	(	Suste_WES7P_PASS1_deploy	PASS 1 Suste	IND0003E	
🙀 App Configuration Policies	<b>S</b>	Suste_WES7p_oberon	PASS 1	IND0003A	
Software Updates		7000_NEW	IND00028		
Operating Systems	1	WES7P_D90Q	IND00030		
Drivers	1	7000		IND0005A	
Driver Packages	8	DeployZXOQ_WES7P-PASS4	ZXOQ7P Pass4 Build	IND00053	
Operating System Images		DeployZXOQ_WES7P ZXOQ7P Pass1 B		IND0004D	
Operating System Upgrade Packages	2	DeployWES7DQ		IND00022	
Boot Images	<b>E</b>	DeployWES7_Z_ZDE		IND0004B	
	<b>S</b>	DeployWES7_Z		IND0002A	
🔁 Task Sequences 🔀 Create Task Sequence	e	XOD_WES7E-IND00047	For Deploying WE	IND00047	
Virtual Hard Disk 🔁 Create Task Sequence	e Media	XOD_WES7E	For Deploying WE	IND00045	
<ul> <li>Windows 10 Servic</li> <li>Import Task Sequence</li> </ul>	e	WIE10_s-IND0006D		IND0006D	
All Windows 10 L		WIE10_s-IND0006C		IND0006C	
Servicing Plans Folder	_	WIE10_s		IND0005D	
	121				

### Figure 28. Create task sequence

- 3. In the New Task Sequence wizard, select Install an existing image package, and click Next.
- 4. Enter the Task sequence name, select the appropriate boot image, and then click Next.

### 🛍 Create Task Sequence Wizard



Task Sequence Information

Create New Task Sequence	Specify task sequence information				
Task Sequence Information					
Install Windows					
Configure Network					
Install Configuration Mar					
State Migration	<u>T</u> ask sequence name:	Task Sequence 5	5		
Include Updates	Description:	WIE10	~		
Install Applications					
Summary			~ · · ·		
Progress					
Completion	Boot image:	Boot image (x64) en-US	B <u>r</u> owse		
< >		< <u>P</u> revious <u>N</u> ext > <u>S</u> umma	ry Cancel		

### Figure 29. Task sequence information

5. Enter the package name and image index and click **Next**. The Index number may vary depending on the configuration of your thin client.

### 😰 Create Task Sequence Wizard



Install Windows

Create New Task Sequence Task Sequence Informatic	Install the Windo	ows operating	system		
Install Windows					
Configure Network	Specify the Windows operating system image and installation information.				
Install Configuration Mar State Migration Include Updates Install Applications Summary Progress Completion	Configure task seq Specify the licensing in Product key: Server licensing mode: Maximum server conne Randomly generation	2 - 2 t the target compute uence for use with I formation for the Wi ections: e the local administrended)		erating system.	Browse
	Password: Confirm password:				
< >		< Previous	Next >	Summary	Cancel



6. On the **Configure the network** page, specify your preferred configuration, and click **Next**.

😰 Create Task Sequence Wiza	ard		×
Configure Networ	rk		
Create New Task Sequence Task Sequence Informatic Install Windows	Configure the ne	etwork	
Configure Network	Select the domain or w	rorkgroup to join.	
Install Configuration Mar	Join a workgroup		
State Migration	Workgroup:	Dell	
Include Updates	Wongroup.	Don	
Install Applications	O Join a domain		
Summary	Domain:		Browse
Progress Completion	Domain OU:		Browse
Completion			
	Specify the account th	at has permission to join the domain.	
	Account:		Set
		< Previous Next > Summary	Cancel
< >		< Previous Next > Summary	Cancer

Figure 31. Configure network

7. On the Install the Configuration Manager Client page, click Browse, and select Configuration Manager Client Package and then click Next.

😢 Create Task Sequence Wiza	ard		×
Install Configurat	ion Manager		
Create New Task Sequence Task Sequence Informatic Install Windows Configure Network Install Configuration Mar	Specify the Configuration N	ation Manager client Manager client package. Configuration Manager site assignment automatically. You can specify additional installation properties.	and
State Migration Include Updates Install Applications Summary Progress Completion	Package: Installation properties:	Configuration Manager Client Package Browse	*
< >	[	< Previous Next > Summary C	ancel

Figure 32. Install configuration manager

- 8. Clear the following check boxes and click Next:
  - Capture user settings and files
  - Capture network settings
  - Capture Microsoft Windows settings

🔁 Create Task Sequence Wiza	ard	×
State Migration		
Create New Task Sequence Task Sequence Informatic Install Windows Configure Network Install Configuration Mar	Configure state migration Select the settings on the destination computer to migrate as part of this image deployment.	
State Migration	This action will capture the user specific settings.	
Include Updates Install Applications	Capture user settings and files	
Summary	USMT Package: Microsoft Corporation User State Migration Tor Browse	
Progress	Save user settings and files on a State Migration Point	
Completion	Save user settings and files locally	
	Capture locally by using links instead of by copying files	
	This option is not applicable to versions of USMT that are earlier than USMT 4.0	
	This action will conture the configuration of the network.	
	Capture network settings	
	This action will capture the Windows specific settings.	
	Capture Microsoft Windows settings	
	< Previous Next > Summary Cancel	
< >		



9. On the Include Software Updates page, select Do not install any software updates check box, and click Next.10. On the Install applications page click Next.

🛍 Create Task Sequence Wiza	ard				×
Install Application	15				
Create New Task Sequence Task Sequence Informatic Install Windows Configure Network Install Configuration Mar State Migration	Select the applications of Applications:		rating system imag	ge.	XDC
Include Updates	Application name	Descrip	tion		
Install Applications		There are no iter	ms to show in this	view.	
Install Applications Summary Progress Completion	☐ If an application insta	llation fails, continue i	installing other ap	plications in the list	
< >		< Previous	Next >	Summary	Cancel



11. On the **Summary** page, verify the information that you have provided, and click **Next**.

### 😢 Create Task Sequence Wizard



Summary

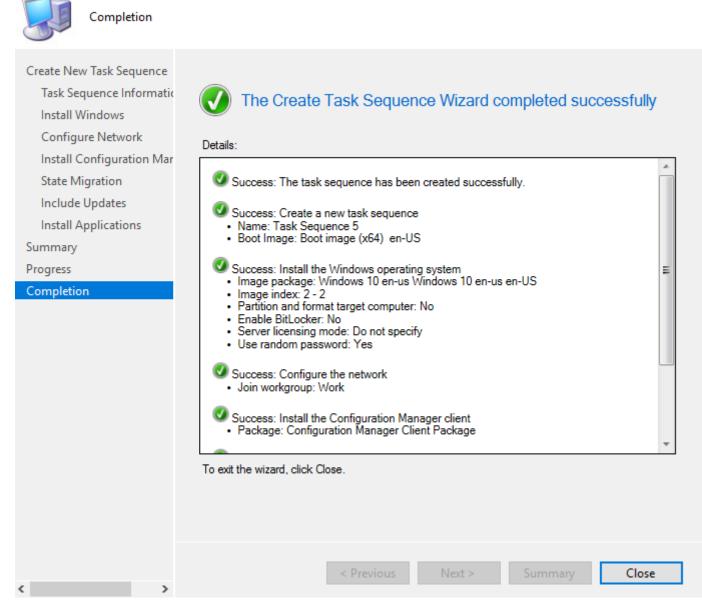
### Create New Task Sequence Confirm the settings Task Sequence Information Install Windows Details: Configure Network Install Configuration Mar Verify the following task sequence details. State Migration Create a new task sequence Include Updates Name: Task Sequence 5 Boot Image: Boot image (x64) en-US Install Applications Install the Windows operating system Summary Image package: Windows 10 en-us Windows 10 en-us en-US Image index: 2 - 2 Progress Partition and format target computer: No Completion Enable BitLocker: No Ξ · Server licensing mode: Do not specify Use random password: Yes Configure the network Join workgroup: Work Install the Configuration Manager client Package: Configuration Manager Client Package Configure state migration Capture user settings: No Capture network settings: No Capture Windows settings: No To change these settings, click Previous. To apply the settings, click Next. < Previous Next > Cancel <



The selected settings are applied.

### 12. Click Close.

### 😰 Create Task Sequence Wizard



13. Right-click the deployment task sequence, and click Edit.

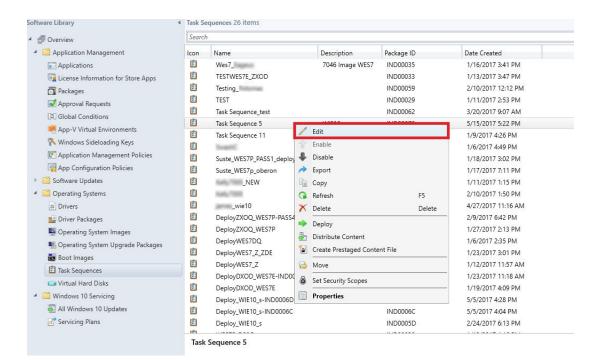


Figure 36. Task sequence

- 14. In the Task Sequence Editor window, click Capture Files and Settings.
- 15. In the Options tab, select the Disable this Step check box and click Apply.
- 16. Click Install Operating System, and do the following:
- 17. Click the **Properties** tab, and add the following command line for mapping the network drive:
  - net use \\IPAddress\share\PrepareOS\_WIE10 password /user: domainname\User name
  - () NOTE: Copy the PrepareOSPartition.wss file available in the C:\windows\setup folder to the Configuration Manager server's shared folder. The operating system partition file is used to format the operating system partition before deployment. For PowerShell ported images, the path is C:\windows\setup\tools.
- 18. Click Install Operating System, and click Add.
- 19. In the Properties tab, enter Mapping\_DEW in the Name field.

Add - Remove 30 🖓	Properties Options		
Capture Files and Settings	Type:	Run Command Line	
Install Operating System Mapping_DEW	Name:	Mapping_DEW	
DEW_Directory	Description:		~
CopyFiles_DEW			~
Restart in Windows PE	Command line:		
Format Apply Operating System	net use L: \\IPAddre DomainPassword	ess of SCCM Server\Share\dew /USER:domain\Us	semame
Apply Windows Settings			
Apply Network Settings Setup Operating System			$\sim$
Setup Windows and Configuration Enable BtLocker	Disable 64-bit	file system redirection	_
	Start in:		Desturan
			Browse
	Package:		Drowse
	Package:		Browse
	Package:	utes):	
	Time-out (min	utes): 15 📿	
	Time-out (min		
	Time-oyt (min		Browse

#### Figure 37. Mapping DEW

- 20. Enter the command line to map the network drive of the SCCM Server share where the DEW files are copied.
- 21. Create cmd scripts execute-DEW-script.cmd and Task-sequence-dew-script.ps1, and copy to the DEW folder in share path. For more information, see Pre-requisites to capture and deploy an operating system.
- 22. Click Apply and then click OK.
- 23. Click Install Operating System, and click Add.
- 24. In the **Properties** tab, enter **DEW\_Directory** in the **Name** field.

Tasl	k Seque	nce 5 T	ask Sequence	Editor		_ 🗆	X
Add • Remove 30 G	Properties	Options					
Capture Files and Settings	Type:		Run Command Line				
	Name:		DEW_Directory				
CopyFiles_DEW	Description:						<u>^</u>
Restart in Windows PE     Mapping     Format     Apply Operating System     Apply Windows Settings     Apply Network Settings     Setup Operating System	Comma	ind line:					
	cmd.exe	/c md C:\D	EW_Temp				^
Setup Windows and Configuration Enable BtLocker	Disa Start in:	ible 64-bit f	ile system redirection			Browse	
	Pad	kage:					
						Browse	
	Time	e-out (minu	ites):	15	÷		
	Run	this step a	s the following account	ţ			
	Acco	unt [				Set	
< III >							
			OF	(	Cancel	A	pply

#### Figure 38. DEW\_Directory

**25.** Enter cmd.exe /c md C:\DEW\Temp in the **Command line** field.

26. Click Apply and then click OK.

27. Click Install Operating System, and click Add.

28. In the **Properties** tab, enter **CopyFiles\_DEW** in the **Name** field.

Figure 39. Copyfiles\_DEW

**29.** Enter xcopy L:\ C:\DEW\_Temp /c /d /e /h /i /k /q /r /s /x /y in the **Command line** field.

**30.** Click **Apply** and then click **OK**.

31. Click Install Operating System, and click Add.

32. In the **Properties** tab, enter **Invoke\_DEW\_Script** in the **Name** field.

VKK_RS5Transition Task Sequence Editor			<u>100-</u>	- 🗆 >	×
Add - Remove 🛞 🏵 👘 🗯	Properties Options				
Install Operating System     Mapping_DEW	Туре:	Run Command Line			
	<u>N</u> ame:	Invoke_DEW_Script			
CopyFiles_DEW	Description:			~	
				~	
Mapping	Command line:				
Apply Operating System	cmd.exe /c "C:\DEW	/_Temp\execute-DEW-script.cmd"		^	
Apply Windows Settings					
Apply Network Settings     Apply Device Drivers				~	
Setup Operating System					
	Disabl <u>e</u> 64-bit file s	ystem redirection			
	Start in: C:\DE	W_Temp		Browse	
	Package:				
				Bro <u>w</u> se	
	Time-out (minutes)	15	*		
	Run this step as th	e following account			
	Account:	WAT5\Administrator		Set	
	Command-line ste phase.	p that runs as a specified account cannot	be used during V	Vindows PE	
< >					
		ОК	Cancel	Apply	
		<b>OK</b>	Cancel	Maha	

Figure 40. Invoke\_DEW\_Script

**33.** Enter cmd.exe /c "C:\DEW\_Temp\execute-DEW-script.cmd" in the **Command line** field.

34. Type C: \DEW\_Temp in the Start in field.

35. Select the Run this step as the following account option and set the account to the domain administrator.

36. Click Apply and then click OK.

37. Click Install Operating System, and click Add.

38. In the **Properties** tab, enter **Restart in Windows PE** in the **Name** field.

		ask Sequence Editor	
Add • Remove () () () Capture Files and Settings Install Operating System () Mapping_DEW () DEW_Directory () CopyFiles_DEW () Invoke_DEW_Script () Restart in Windows PE () Mapping () Format () Apply Operating System () Apply Vindows Settings () Apply Network Settings () Setup Operating System () Setup Operating System () Setup Windows and Configuration () Enable BtLocker	Type: <u>Name:</u> <u>Description:</u> Specify what to run The <u>boot</u> imag The <u>boot</u> imag The <u>currently</u> in <u>Notification message</u> :	e assigned to this task sequence nstalled default operating system before restarting	The computer must
< III >	Message display time-	out (seconds):	30 📚

Figure 41. Restart in Windows PE

**39.** Click **Apply** and then click **OK**.

40. Click Install Operating System, and click Add.

41. In the **Properties** tab, enter Mapping in the Name field.

		ask Sequence Editor 📃 🗖 🗙			
Add •       Remove       Image: Capture Files and Settings         Install Operating System       Mapping_DEW         DEW_Directory       CopyFiles_DEW         Invoke_DEW_Script       Restart in Windows PE         Mapping       Format         Apply Operating System         Apply Operating System         Apply Network Settings         Setup Operating System         Setup Operating System         Setup BitLocker	Properties Options Type: Name:	Run Command Line			
	Description:	Luobbi A			
	Command line:  Inet use K: \\IPAddress of SCCM server\Share /USER:Domain\Usemame DomainPassword				
	and the second s	file system redirection Browse			
	Time-out (minu	s the following account Set			
< III >					
		OK Cancel Apply			

#### Figure 42. Mapping

42. Enter the command line to map the network drive of the SCCM Server share where the DEW files are copied.

43. Click Apply and then click OK.

44. Click Install Operating System, and click Add.

45. In the **Properties** tab, enter **Format** in the **Name** field.

Add • Remove 30 😭	Properties Options			
Capture Files and Settings	Туре:	Run Command Line		
Mapping_DEW	Name:	Format		
DEW_Directory     CopyFiles_DEW     Invoke_DEW_Script	Description:			^ ~
<ul> <li>Restart in Windows PE</li> <li>Mapping</li> <li>Format</li> <li>Apply Operating System</li> <li>Apply Windows Settings</li> <li>Apply Network Settings</li> <li>Setup Operating System</li> <li>Setup Operating System</li> <li>Setup Windows and Configuration</li> <li>Enable BtLocker</li> </ul>	Command line:			
	Diskpart.exe /s Prepa	reOSPartition.wss		< >
	Disable 64-bit fi Start in: KA	le system redirection		Browse
				Browse
	Time-out (minut	tes):	15	
	Account			Set

#### Figure 43. Format

**46.** Enter Diskpart.exe /s PrepareOSPartition.wss in the **Command line** field.

- 47. Enter  $\kappa: \setminus$  in the **Start in** field.
- 48. Click Apply and then click OK.
- 49. Click Install Operating System, and click Add.
- **50.** Click the **Properties** tab, and do the following:
  - a. Click the Apply an operating system from a captured image radio button.

Add • Remove St C	Properties Options				
Capture Files and Settings	Туре:	Apply Operating System In	nage		
Mapping_DEW	<u>N</u> ame:	Apply Operating System			
DEW_Directory CopyFiles_DEW Invoke_DEW_Script Restart in Windows PE Mapping Format Apply Operating System	Description:	Actions to apply operating	system	~ ~	
	Apply operating	Apply operating system from a captured image			
	Image package:	Rowdies 2.0 en-US		Browse	
Apply Windows Settings	Image index:	1 - 1	~		
Setup Operating System	O Apply operating	system from an original i	nstallation source		
Setup Windows and Configuration Enable BitLocker	Package:			Browse	
Enable bitLocker	Edition:		~		
	✓ Use an unattene Pa <u>c</u> kage:	ded or Sysprep answer fil TestSysprep	e for a custom ins	Browse	
	Eile name:	sysprep xml			
	Select the location v Destination:	where you want to apply the Specific disk and partition		em. V	
	Digk	0 ~	Partition:	5 ~	
< 111 >	Digk:	0 ~	Partition:	5 ~	

Figure 44. Apply Operating System

- **b.** Browse to the location where you have placed the image package.
- c. From the Image index drop-down list, select a value of the image. Ensure that the value is the highest of 1-1, 2-2, 3-3.

(i) NOTE: If only a single image exists, then by default the value is displayed as 1-1.

- d. Select the Use an Unattended or Sysprep answer file for a custom installation check box.
- e. Browse to the location where you have placed the unattended installation software package created in step b.
- f. In the File name field, enter the file name of the unattended installation software package.
- g. From the Destination folder drop-down menu, select Specific disk and partition for destination.
- h. From the **Disk** drop-down menu, select **0**.
- i. From the Partition drop-down menu, select 5.
- j. Click **Apply** and then click **OK**.
- 51. Click Install Operating System, and click Add.

52. In the Properties tab, enter Apply Network Settings in the Name field.

Add • Remove 30 G	Properties Options		
Capture Files and Settings Install Operating System Mapping_DEW	Type:	Apply Network Settings	
	Name:	Apply Network Settings	
DEW_Directory     CopyFiles_DEW     Invoke_DEW_Script	Description:	Actions to configure network settings	~
Restart in Windows PE     Mapping     Format     Apply Operating System     Apply Windows Settings     Apply Network Settings     Setup Operating System     Setup Windows and Configuration     Enable BtLocker	<ul> <li>Join a workg</li> <li><u>W</u>orkgroup:</li> <li>Join a doma</li> </ul>	proup DelWyse	атары а
	Domain:		Browse
	Domain OU:		Browse
	will be migrated to Agrount:	t that has permission to join the computer to any of from the capture steps and the above domain (if s infigure network adapters to use DHCP by default.) fy static IP address and other configuration option	pecified). Set
	Name	Adapter	
		There are no items to show in this view,	C.
< III >			

Figure 45. Apply Network Settings

53. Select the Join a workgroup radio button and specify the workgroup name.

54. Click Apply and then click OK.

55. Click Setup Operating System, and click Add.

56. In the Properties tab, enter Setup Windows and Configuration Manager in the Name field.

Add • Remove 1	Properties Options		
Capture Files and Settings Install Operating System	Туре:	Setup Windows and ConfigMgr	
Mapping_DEW	Name:	Setup Windows and Configuration Manager	
<ul> <li>DEW_Directory</li> <li>CopyFiles_DEW</li> <li>Invoke_DEW_Script</li> <li>Restart in Windows PE</li> <li>Mapping</li> <li>Format</li> <li>Apply Operating System</li> <li>Apply Windows Settings</li> <li>Apply Network Settings</li> <li>Setup Operating System</li> <li>Setup Operating System</li> <li>Setup Windows and Configuration</li> <li>Enable BtLocker</li> </ul>	Description:	Actions to setup Windows and Configuration	Manager client
	Manager client. Client pa <u>c</u> kage:	Configuration Manager Client Package	Browse
	Installation properties:		^
< 111 >			~

Figure 46. Setup Windows and Configuration Manager

57. In the Client Package field, browse and select Configuration Manager Client Package.58. Click Apply and then click OK.

### **Deploying Windows reference image**

To deploy the Windows reference image, do the following:

- 1. Right-click the created task sequence, and click **Deploy**.
- 2. Specify the collection to which you want to deploy the task sequence, and click Next.

🔶 Deploy Software Wizard			×
General			
General Deployment Settings Scheduling User Experience Alerts	Specify general Task sequence:	information for this deployment Win10_Task Sequence Bro	owse
Distribution Points Summary Progress	Collection:	Win10_1 Bro	owse
Completion	Automatically distr	ribute content for dependencies	^
		< Previous Next > Summary	Cancel

Figure 47. Deploy software wizard

- 3. On the Specify settings to control how this software is deployed page, select Required from the Purpose drop-down list.
- 4. To make this task sequence available for software deployment, select **Configuration Manager Clients, media and PXE** from the drop-down list and click **Next**.

Deploy Software Wizard     Deployment Se		×
General Deployment Settings Scheduling User Experience	Specify set	tings to control how this software is deployed
Alerts	Action:	Install
Distribution Points	Purpose:	Required $\checkmark$
Summary		
Progress		
Completion	Send wake Allow clien installation Specify wheth run when you	software to the user's primary device e-up packets ts on a metered Internet connection to download content after the deadline, which might incur additional costs er to make this task sequence available to Configuration Manager clients, and whether it is available to deploy an operating system by using boot media, prestaged media, or PXE.
	Configuration	Manager clients, media and PXE
		< Previous INext > Summary Cancel



5. On the Specify the schedule for this deployment page, click New.

Deploy Software Wizard		>	×
Scheduling			
General Deployment Settings Scheduling	Specify the schedule fo	or this deployment	
User Experience	This program will be available as	been distributed to the content servers unless it is scheduled for a	
Assignment Schedule		X ify the assignment schedule.	
Cor Cor O Assign to the following Occurs on 5/16/2017 2 Occurs on 5/16/2017 2	50 PM	available:	
As soon as possible		New Edit Delete	
		Cancel	
		< Previous Next > Summary Cancel	

Figure 49. Assignment schedule

The **Assignment Schedule** window is displayed.

- 6. On the Assignment Schedule window, do one of the following:
  - Select the specific time to start the deployment.
  - Select the **As soon as possible** option to deploy the software after you complete the configuration.
- 7. In Assignment Schedule click OK.
- 8. On the User Experience page, retain the default options and click Next.
- 9. On the Alert page, retain the default options and click Next.

Deploy Software Wizard		×
User Experience		
General Deployment Settings Scheduling	Specify the user experience for the installation of this software on the selected devices	
User Experience	Notification settings:	
Alerts Distribution Points	Allow users to run the program independently of assignments	
Summary	Show Task Sequence progress	
Progress	When the scheduled assignment time is reached, allow the following activities to be performed outside the	
Completion	maintenance window:	
	Software installation	
	System restart (if required to complete the installation)	
	Write filter handling for Windows Embedded devices	
	Commit changes at deadline or during a maintenance window (requires restarts)	
	If this option is not selected, content will be applied on the overlay and committed later.	
	Internet based clients:	
	Allow task sequence to run for client on the Internet	
	< Previous Next > Summary Cancel	



- 10. On the Distribution Points page, select the Download content locally when needed by running task sequence deployment option, and then select the When no local distribution point is available, use a remote distribution point option and then click Next.
- 11. On the Summary page, verify the details, and click Next, and then click Close.

After the task sequence is complete, the thin client restarts in the Windows pre-installation environment.

**NOTE:** Time for the advertisement to appear at the client side depends on the thin client and the user policy refresh interval time. It also depends on the server and network parameters such as server capacity to handle the clients and network traffic. If you do not receive an advertisement, go to Control Panel > Configuration Manager > Actions > Machine Policy Retrieval & Evaluation Cycle, and click Run Now.

General	Components	Actions	Site	Cache	Network	
	an action to run red in the Confi				y from schedule	s that are
Actions	-		1	0.4		
and the second second second	ine Policy Retri Policy Retrieval			a local state of the second state		
L					Run No	w
		52.07				
		_	_			

Figure 51. Configuration manager properties

**12.** Deploy the Windows 10 IoT Enterprise reference image.

After successful deployment, the thin client automatically logs in using the local user account, and the Dell Wyse scripts run on the destination thin client. The scripts enable the Unified Write Filter, and restarts the thin client.

## Prerequisites to deploy software applications

The following are the prerequisites to deploy the third party software applications:

- The device should be discovered in the Configuration Manager server.
- Disable the write filter.
- Obtain the latest application, and copy it to the local drive on the Configmgr site server's shared location C: \ConfigMgr packages\apps\.
- The device should be a member of a collection that has a configured maintenance window. This configured maintenance window allows you to manage the device when the write filter is disabled and enabled, and when the device restarts.
- For more information about the application deployment with System Center Configuration Manager, see Deploy applications with System Center Configuration Manager at <a href="https://docs.microsoft.com/">https://docs.microsoft.com/</a>.
- () NOTE: When you deploy applications to the devices running Windows 10, that are write-filter-enabled, you can specify whether to disable the write filter on the device during the deployment. After you disable the write filter, restart the device. If the write filter is not disabled, the software is deployed to a temporary overlay, and the software is not installed when you restart the device.
- **NOTE:** In the **Deploy Software Wizard**, the user experience setting that controls the write filter behavior is a check box named **Commit changes at deadline or during a maintenance window**.

For more information on managing Windows Embedded devices that are write-filer enabled, see <u>blogs.technet.microsoft.com</u> and Planning for client deployment to Windows Embedded devices in System Center Configuration Manager at <u>https://docs.microsoft.com/</u>.

## Prerequisites to capture and deploy an operating system

- When capturing an operating system image by using capture media task sequence, ensure that the FODPacks folder is not present in the C drive. If there is any FODPacks folder, delete the folder.
- When you deploy an operating system image to the client by using a task sequence, the size of the wim file that is captured using the capture media and the size of the used space of drive C in the reference device put together must be less than the capacity of drive C.

For example, if the size of the wim file that is captured from reference device is 8 GB, the size of the used space in the drive C is 17 GB. You can then deploy the wim file only if the capacity of operating system drive is greater than 25 GB.

You must create cmd scripts execute-DEW-script.cmd and Task-sequence-dew-script.ps1 before you create a task sequence to deploy Windows reference image.

1. Create a text file with name **execute-DEW-script** and copy the following content to the file:

```
%Windir%\System32\WindowsPowerShell\v1.0\powershell.exe -command Set-
ExecutionPolicy Unrestricted
%Windir%\System32\WindowsPowerShell\v1.0\powershell.exe "C:\DEW_Temp\Task-sequence-
dew-script.ps1"
```

- 2. Save the text file in the SCCM Share DEW folder with name execute-DEW-script.cmd.
- 3. Create a text file with name **Task-sequence-dew-script** and copy the following content to the file:

```
#C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe Set-ExecutionPolicy
-ExecutionPolicy Unrestricted
#Get GUID
$id = Get-WmiObject -Class Win32_Volume |Where-Object {$_.Name -like "C:\DEW\"} |
Select-Object -property "DeviceID"
#Set-Volume -UniqueId $test.DeviceID -NewFileSystemLabel DEW_VOLUME`
#formatting DEW volume
Format-Volume -Path $id.DeviceID -FileSystem NTFS -Force -Full
$service = "DEWSERVICE"
Set-Service -Name $service -StartupType Disabled
New-Item -path 'C:\DEW\DEW_VOLUME' -ItemType Directory
New-Item C:\DEW\DEW_VOLUME\DEW.txt
Set-Content C:\DEW\DEW_VOLUME\DEW.txt 'DEW_PARTITION'
```

4. Save the text file in the SCCM Share DEW folder with name Task-sequence-dew-script.ps1.

**NOTE:** For better performance during imaging, Dell Technologies recommends that the total size of the wim file and the used space is 1 GB less than the size of drive C.



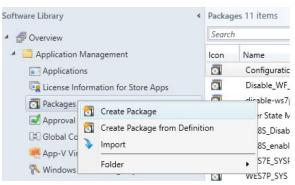
# Creating software package for unattended installation

You must create a software package for unattended installation. Unattended installation is an automated installation technology that you can use to install or upgrade an operating system with minimal user intervention.

() NOTE: Copy the C:\windows\setup\sysprep.xml file (for legacy scripts) and C:

\windows\setup\tools\sysprep.xml file (for PowerShell ported scripts) with supported images to the
\SCCMserver\share-folder location on the Configuration Manager server. The .xml file must be accessible by the
Configuration Manager server.

#### 1. Expand Software Library > Overview > Application management > Packages.



#### Figure 52. Packages

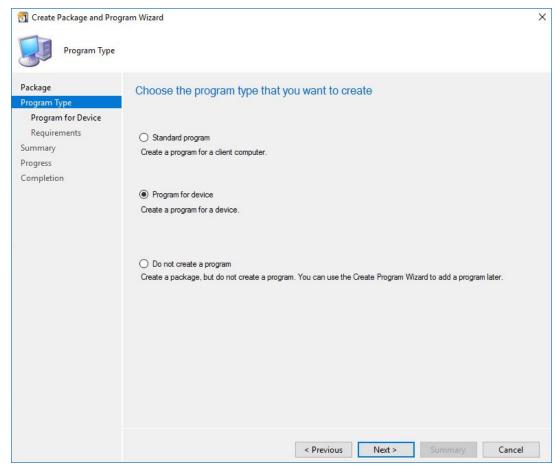
- 2. Right-click **Packages** and click **Create Package**.
- 3. Enter the package name, description, manufacturer name, language, and version.

Treate Package and Pro	gram Wizard		×
Package			
Package	Specify infor	mation about this package	
Program Type			
Standard Program Requirements Summary	Enter a name and Application Catal	d other details for the new package. To take full advantage of new features that include the og, use an application instead.	
Progress	1000		
Completion	Name:	sysprep_wie10	_
	Description:	sysprep	^
			v.
	Manufacturer:	Dell	-
	Language:	English Version: 1.0	
	This package	e contains source files	
	Source folde	n	
	W	Share\WIE10_SYSPREP Browse	
	_		•

#### Figure 53. Information about package

- 4. Browse to the source folder where you have copied the sysprep files.
- 5. Click Next.
- 6. Select Program for device radio button, and then click Next.

(i) NOTE: Based on your requirement, you can select any one of the options available on the **Program type** page.



#### Figure 54. Program type

- 7. Enter the package device information, and click Next.
- 8. Enter the estimated disk space, and click Next.

Specify the requirem	ents for this program	n for a device		
Estimated disk space:	10	MB		~
Download program:	As soon as possible			~
Additional requirements:				
				^
				~
	< Previo	ous Next >	Summary	Cancel
	Estimated disk space: Download program:	Estimated disk space: 10 Download program: As soon as possible Additional requirements:	Download program: As soon as possible Additional requirements:	Estimated disk space: 10     Download program: As soon as possible     Additional requirements:

Figure 55. Estimated disk space

 ${\bf 9.}~$  Verify the information that you have provided and click  ${\bf Next.}$ 

Summary	
Package Program Type Program for Device Requirements	Confirm the settings
Summary Progress Completion	General:         • Name: sysprep_wie10         • Description: sysprep         • Version: 1.0         • Publisher: Dell         • Language: English         • Source files: \\
	< Previous Next > Summary Cancel

#### Figure 56. Summary page

The settings are applied.

#### 10. Click Close.

11. In the **Distribute Content** wizard, right-click the software package which you have created, and click **Distribute content**.

🋃 Distribute Content V	/izard			×
Content De	stination			
General Content Destination Summary Progress Completion	Content will be dist	ntent destination ibuted to the following distribution oups that are currently associate	on points, distribution point gro ed with collections.	ups, and the
	Content destination	E)	Q	Add 🔻
	Name	Description	Associations	Collections
		There are no items to show in		Distribution Point
				Distribution Point Group
				•
		< Previous	Next > Summary	Cancel

Figure 57. Content destination

12. From the Add drop-down list, select Distribution Point.

Add Distribution Points				>
Select distribution points that will host this conte Available distribution points:	ent.			
Filter				Q
Name	Туре	Descript	tion	
SCCM1902.SUSDV60.COM	On-premises			
			ОК	Cancel

#### Figure 58. Add distribution points

- 13. In Available distribution points, select the check boxes applicable to the distribution points that host your content, and click OK.
- 14. Click Next.

Content Status			Related Objects
		Success: 1 In Progress: 0 Failed: 0 Unknown: 0	🐻 Content Status
	1 Targeted (Last Update: 5/17/2017 3:20 PM)		

#### Figure 59. Content status

The content status is displayed in green. It may take a few minutes to complete the distribution process.