Windows 10 Upgrade-Broad Deployment

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The purpose of this guide is to lay out the steps for deployment the OS upgrade from the M365 skus across your network. This guide is assuming you have the **M365 Business, M365 E3, or M365 E5** License. After the you complete this guide you will have:

- Run an assessment for Windows 10 Upgrade Readiness for all the devices on your network
- Created Windows 10 Installation Media
- Downloaded and Configured MDT and WDS to deploy the Windows 10 Upgrade
- Tested the upgrade on 2 pilot devices
- Configured WDS and MDT for Light Touch Installation (LTI) to all users on your network

Disclaimer

This guide is meant to provide best practices for Windows 10 Upgrade readiness and broad deployment across your network. It is meant to be used as a template, but the settings configured will not be the same in all use cases. You must access all the devices in your network to decide how many different versions of the WIM file you need to create to match the compatibility of the workstation. Pax8 is not liable for any configuration you create that do not meet the customers standards. As a best practice, test all configurations with a pilot group before moving to broad deployment across an entire organization



Pre-Flight Checklist



- a. Have Local Admin ID on all Workstations
 - i. We need this when running the Microsoft Assessment and Planning toolkit
 - ii. Workstations must be turned on for this tool to run an assessment on that device
- b. Baseline System Requirements on Sever:
 - i. Microsoft Deployment Toolkit:
 - 1. Supported Operating System
 - a. Windows 10, Windows 7, Windows 8, Windows 8.1, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019
 - 2. Other Requirements
 - a. The Windows ADK for Windows 10, version 1809 or later, is required for all deployment scenarios.
 - b. Configuration Manager, version 1810 or later, is required for zero-touch installation (ZTI) and user-driven installation (UDI) scenarios.
- c. Access to Primary DC
 - i. This is where we will be spending most of our time during setup
 - ii. This is where we will run and install the following
 - 1. Microsoft Assessment and planning toolkit
 - 2. MDT
 - 3. WDS
- d. Apps you want to Deploy
 - i. Part of the configuration for MDT allows us to add applications to our deployment. I do not cover that in this guide but can be helpful if you want to push out any on-premise applications. I recommend using Intune for this feature.
- e. Choose 2 pilot devices you want to enroll into Intune
 - i. These devices we will be using to test our deployment share and configure our bootstrap.ini file so the broad audience has a LTI (Lite touch installation) experience



Phases:

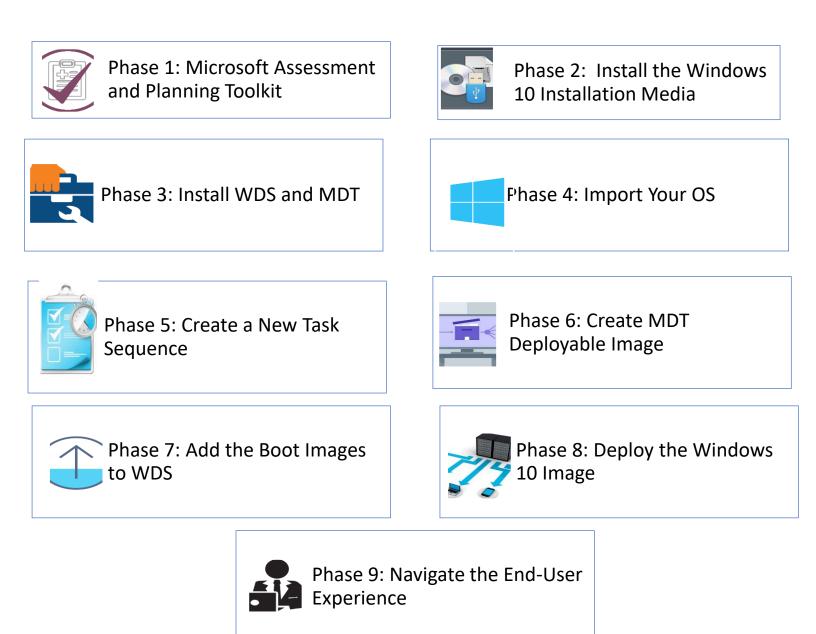




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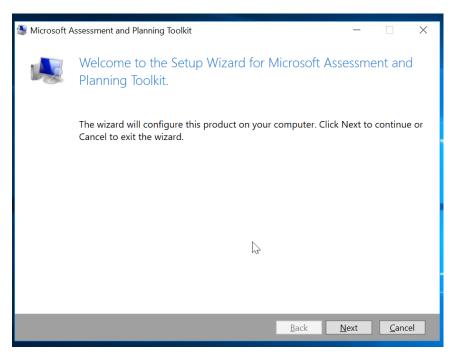
Phase 1: Microsoft Assessment and Planning ToolkitPhase 2: Install the Windows 10 Installation MediaPhase 3: Install WDS and MDTPhase 4: Import Your OSPhase 5: Create a New Task SequencePhase 6: Create MDT Deployable ImagePhase 7: Add the Boot Images to WDSPhase 8: Deploy the Windows 10 ImagePhase 9: Navigate the End-User Experience



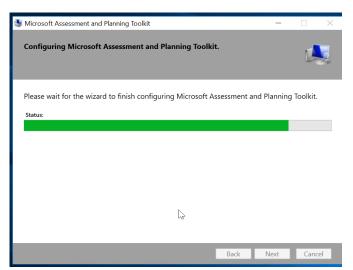
Install the Microsoft Assessment and Planning Toolkit

We want to perform an assessment on the computers in our network to make sure they are compatible for the Windows Upgrade. The Microsoft assessment and planning toolkit allows us to scan all the computers in our Active Directory or by scanning a certain IP range and tells us which devices are ready for the upgrade.

1. Go to the following link on your AD server and download the Microsoft Assessment and Planning Toolkit: <u>https://www.microsoft.com/en-us/download/details.aspx?id=7826</u>

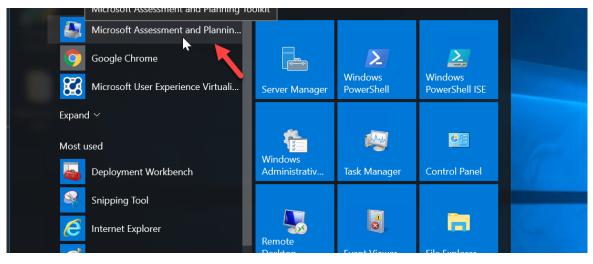


2. Run through the wizard to install:

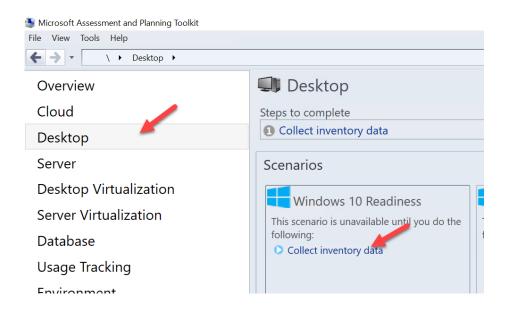




3. Go to start and open the program:



4. Click Desktop, then collect inventory data under Windows 10 Readiness





5. Choose Windows Computers and click next:

aloto						
🔄 Inventory and A	ssessment Wizard $ imes$					
퉳 Inventory Scenarios						
Inventory Scenarios	The MAP Toolkit helps you to collect information for several different inventory scenarios. The scenarios you					
Discovery Methods	choose determine the technologies used to collect					
Active Directory Credentials	information from computers in your environment. Choose your scenario.					
Active Directory Options	Windows computers					
All Computers Credentials	Linux/UNIX computers					
Credentials Order	Active Devices and Users					
Summary	Description This inventory scenario uses WMI to collect hardware, device, and software information about Windows-based computers in your environment, including Microsoft Office, SQL Server, Sha					
	Collector Technologies: WMI					
	< Previous Next > Einish Cancel					

6. Choose you methods:

	lnventory and A	Inventory and Assessment Wizard				
-	Discovery Methods					
12	Inventory Scenarios	Select which methods to use to discover computers.				
_	Discovery Methods	Use Active Directory Domain Services (AD DS)				
١	Active Directory Credentials	Use Windows networking protocols				
s	Active Directory Options	Use System Center Configuration Manager (SCCM)				
-	Scan an IP Address Range	Scan an IP address range				
~		Manually enter computer names and credentials				
	All Computers Credentials	Import computer names from a file				
	Credentials Order					
	Summary	~~~				
		Select this checkbox to import computer				
		< Previous Next > Finish Cancel				



7. If using AD DS, enter necessary info:

	lnventory and A	ssessment Wizard	×				
-	Active Directory Credentials						
2	Inventory Scenarios		formation used to connect to the est and discover domain-joined com				
_	Discovery Methods	(* Indicates required fi					
١	Active Directory Credentials	<u>D</u> omain*:	wrajrecords.com				
50	Active Directory Options	Domain account*:	wrajrecords\nross				
c	Scan an IP Address Range		Examples, comaincuser or user@doma This account does not require administra				
	All Computers Credentials	P <u>a</u> ssword*:					
	Credentials Order						
	Summary						
		< <u>P</u> r	revious Next > Einish Cancel				

8. If using IPs, enter range:

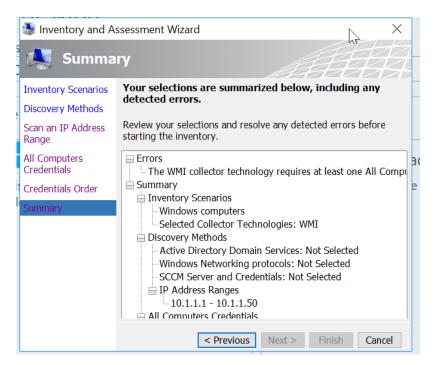
Sinventory and As	ssessment Wizard		\times				
🕵 Scan an	Scan an IP Address Range						
Inventory Scenarios Specify the IP address ranges to scan for computers and devices.							
Scan an IP Address Enter the IP address ranges below. Press Tab to insert a new row.							
All Computers Credentials	IP addresses between the starting and ending values will be included. A maximum of 100,000 addresses are allowed.						
Credentials Order	IP address ranges:						
Summary	Starting Address	Ending Address					
	< Previous	Next > Finish Cance	el l				



9. Ensure you add an administrator account with local admin access to all computers

	vill be used to connect to the mach can collectinformation from the compu	
Account admin@domain.com	Applies to	
Create	Edit	Remove

10. Finish the wizard till completion





11. After the assessment runs, you will get an excel sheet with a summary:

	Clipboard	r _{ii}	Font	Es.	Alignment	ra Number
A	1 * :	$\times \checkmark$	f_x Windo	ws 10 Assessmen	t Summary for Client Con	nputers
		A		В		c
1	Windows 10	Assessn	nen: Summ	ary for Clien	t Computers	
2	client operating		,		information for compute	
3	Windows 10 Rea	dinore	▼ Before Ha	rdware Upgrades	 After Hardware U 	legrador Z
4	Meets Minimum		70	ruware Opgrades	232	pgrades
5	Requirements	System	10			
6	Not Ready for W	indows 10	162		0	
	Insufficient Data	(Not	31		31	
7	Inventoried)					
8						
9					t	
11						
12						
	1					

- a. **Insufficient data** typically means that the computer was turned off or that there were not sufficient permissions on that device with the credentials provided
- b. Client Assessment tab shows a list of the devices in a more detailed view:

Windows 10 Assessn This worksheet provides a sur client operating system.			nformation for computers that are
Windows 10 Readiness	- Ba	fore Hardware Upgrades	 After Hardware Upgrades
Meets Minimum System Requirements	70	ore nationale opgrades	232
Not Ready for Windows 10	16	2	0
Insufficient Data (Not Inventoried)	31		31
			Im



c. AfterUpgrades shows what you need to do to upgrade:

This worksheet describes compu the minimum system requireme	ters that are not currently able to runnts for Windows 10.	n Windows 10 and the hardware	upgrades requ
Computer Name	IP Address	CPU	Memory
Map-7- x64.map.test.CONTOSO.COM	10.217.74.28;fe80::4836:516c:1d5c: 36a5;2001:4898; 9:323d:4836:516c :1d5c:36a5		Upgrade to
Map-81- multi.map.test.CONTOSO.COM	172.16.0.218;fe80::3435:8373:4caa: c948 10.217.72.227;fe80::3409:ae00:9be :19bc;2001:4898:e0:323d:d85d:5f6 7:1593:a55b;2001:4898:e0:323d:79 c4:3acf:7e0d:3d22;2001:4898:e0:	@ 2.13GHz, 64 bit) Upgrade to
MAP-81- x64.map.test.CONTOSO.COM	10.217.72.236;fe80::e592:bb87:ea e2:ce08;2001:4898:e0:323d:f1a9:1 d7c:d1fd:ccd7;2001:4898:e0:323d: 9058:13cf:eb19:9821;2001:4898:e0	Intel(R) Xeon(R) CPU L5630 @ 2.13GHz, 64 bit	Upgrade to
Map-81-x64- cn.map.test.CONTOSO.COM	10.217.74.29;fe80::7012:ae67:b913 :4393;2001:4898:e0:323d:d0bd:8d0 :ff4c:5cf4:2001:4898:e0:222d:ad28	@ 2.13GH2 4 bit	Upgrade to

Install the Windows 10 Installation Media

 Login to your admin center and scroll down to the Windows 10 Card on your Dashboard. Here you can click on a link to download the installation media. **NOTE** you will want to install this on your AD server:

iii Micro	osoft 365 admin center				₽ ፼ ?	NR
> 命	🛱 Device Management 📑	♦ Azure Active Directory	<table-cell> Support</table-cell>			
یں ج ج	 Get started Set up device enrollment Configure device profiles Create app policies 	 Customize sign in Enable password reset Add an application 	 + New service request IE View service requests 			
母	Device policies >	Device actions >	Windows 10 Upgrade			
⊟ € ₽	 + Add policy 	 Deploy Windows with AutoPilot Remove company data Factory reset Manage Office deployment 	 ↓ Install upgrade ▷ Share the download link ↓ Create installation media ♀ Troubleshoot installation 	6		
2	Train yourself	🛱 Message center >		⑦ Need help?	☐ Feedback	



https://www.microsoft.com/en-us/software-download/windows10

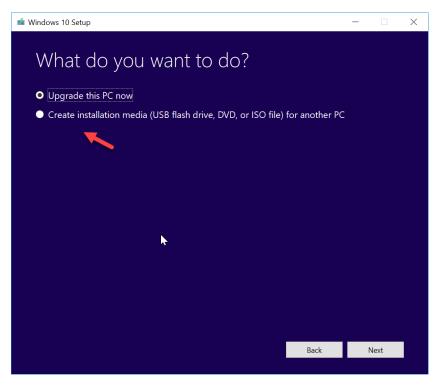
Download Windows 10	
Windows 10 October 2018 Update now available The Update Assistant can help you update to the latest version of Windows 10. To get started, click Update now Update now Privacy	
Create Windows 10 installation media To get started, you will first need to have a license to install Windows 10. You can then download and run the media creation tool. For more information on how to use the tool, see the instructions below.	

2. Click on Download tool now to launch the Wizard. You will want to run this wizard for upgrades either on the existing computer or to create the ISO file to upgrade other computers. First Agree to the terms and conditions:

🖆 Windows 10 Setup	-		×
Applicable notices and license terms Please read this so you know what you're agreeing to.			
MICROSOFT SOFTWARE LICENSE TERMS		^	
MICROSOFT MEDIA CREATION TOOL			
IF YOU LIVE IN (OR ARE A BUSINESS WITH A PRINCIPAL PLACE OF BUSINES UNITED STATES, PLEASE READ THE "BINDING ARBITRATION AND CLASS ACT WAIVER" SECTION BELOW. IT AFFECTS HOW DISPUTES ARE RESOLVED. These license terms are an agreement between you and Microsoft Corporation (or one of affiliates). They apply to the software named above and any Microsoft services or softwar (except to the extent such services or updates are accompanied by new or additional ter case those different terms apply prospectively and do not alter your or Microsoft's rights I pre-updated software or services). IF YOU COMPLY WITH THESE LICENSE TERMS, YOU RIGHTS BELOW. BY USING THE SOFTWARE, YOU ACCEPT THESE TERMS.	fits fits re upda ms, in v relating	tes vhich to	
1. INSTALLATION AND USE RIGHTS.			
a) General. You may install and use one copy of the software to develop and test applications, and solely for use on Windows. You may make one backup copy of software for the sole purpose of reinstalling the software.			
b) Third Party Software. The software may include third party applications that I Privacy statement		î, 🗸	
<u>D</u> ecline	<u>A</u> o	cept	



3. In this guide, we are going to create the installation media:

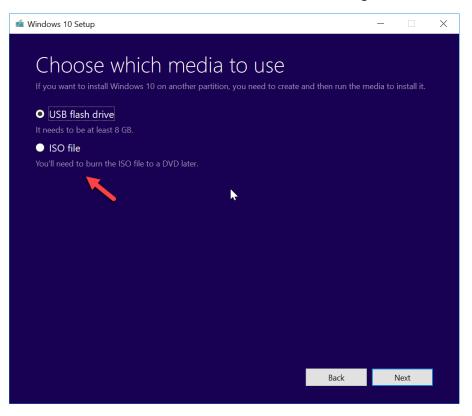


- 4. For the "Upgrade this PC Now" option, please watch this short video: https://www.microsoft.com/en-us/videoplayer/embed/RE201WL
- 5. Chose 32-bit or both:

i Windows 10 Setup			- 🗆	×
	language, architecture, n one of the available options to continue.	and ed	ition	
Language	English (United States)			
Edition	Windows 10 $$			
Architecture	64-bit (x64) ~ 32-bit (x66) 64-bit (x64) ~ Both			
		<u>B</u> ack	<u>N</u> ext	



6. Choose which media to use, we will be downloading the ISO file:

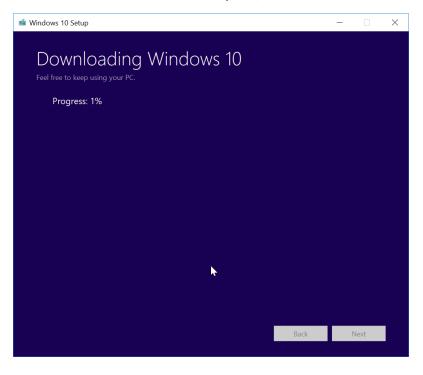


7. Select your destination to save the ISO:

📹 Windows 10 Setup	—	×
📹 Select a path		\times
← → → ↑ 📜 « Desktop > Windows 10 ISC	Search Windows 10 ISO	P
Organize • New folder		?
 Pictures * Name BitTitan Migratio Camtasia Microsoft Teams OneDrive - PAX8 PAX8 Sales Engineers - 	↑ Date modified	Тур
S This PC		>
File name: Windows 10 Pro ISO Save as type: ISO File (*.iso)		~
▲ Hide Folders	Save Cancel	
	Back Next	



8. Allow the download to complete, click Finish when done:



9. You will now have the ISO download to burn to a DVD:

📕 🔽 📜 🖛 Windows 1	0 ISO					- 0	×
File Home Share	View	5					~ 🕐
← → × ↑ 🖡 > This	PC > Desktop > Windows 10 ISO				v U	Search Windows 10 ISO	Q
📌 Quick access	Name	Date modified 2/7/2019 4:12 AM	Type Disc Image File	Size 4,050,240 KB			
Downloads #							
 BitTitan Migrations Camtasia Microsoft Teams Ch OneDrive - PAX8 							
la OneDrive - PAX8							
PAX8 Sales Engineers - Sa							
🧢 This PC							
🔮 Network							
1 item							



Install WDS and MDT

Windows Deployment Services enables you to deploy the Windows Operating system over your network. It can also listen for PXE boot request. The Microsoft Deployment toolkit (MDT) allows us to create custom WIM files in a deployment share. We will be putting WIM files that we create with MDT into the boot images section of WDS so that computers are immediately prompted to upgrade when the boot their device.

- 1. Install WDS
 - a. Add roles and features

Server	Ma	nager 🕨 D	ashboard	d			• 3) 	M	<u>/l</u> anag						
		WELCOME TO	SERVER MAN	AGER												
ge Services	Δ	QUICK START WHAT'S NEW	1	2 <u>A</u> 3 A 4 C	Add roles an Add roles an Add other s Create a ser Connect thi	nd fe ervers	<u>ytures</u> s to m roup	anage	ē	ces						
		b. Role I dd Roles and Fea elect insta Before You Beg Installation Type Server Selection	allation t	Select machin	the installation ne, or on an of ole-based or fe nfigure a single	fline vir eature-l	tual hard based ir	d disk (\ nstallati	oles and /HD).			physical (DESTIN	MDT	Testin	g
				⊖ Re Inst	mote Desktop tall required ro session-based	5 Servic le servic	ces insta ces for V	allation /irtual D				create a vi	rtual m	achine	-base	ed

< Previous Next > Cancel

Install

 \times

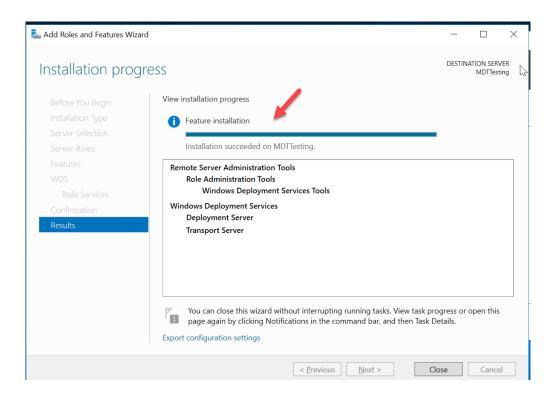


c. Choose what server I want to install on

d. Choose Windows Deployment Services

Active Directory Lightweight Directory Services	\sim
Active Directory Rights Management Services	
Device Health Attestation	
DHCP Server	
DNS Server	
Fax Server	
File and Storage Services (1 of 12 installed)	
Host Guardian Service	
Hyper-V	
MultiPoint Services	
Network Controller	
Network Policy and Access Services	
Print and Document Services	
Remote Access	
Remote Desktor Services	
Volume Activation Services	
Web Stover (IIS)	
N Windows Deployment Services	
Windows Server Essentials Experience	
Windows Server Update Services	

- e. Click Add Features>Next>Next>Next>Next>Install
- f. Wait for installation to complete:

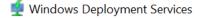


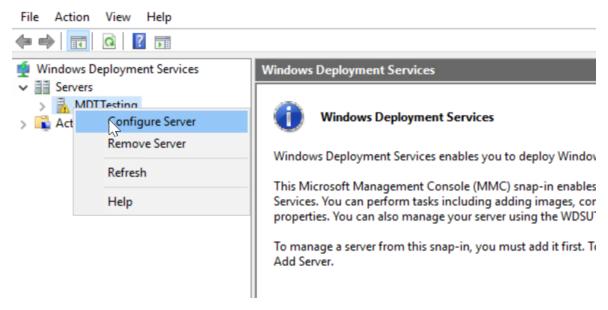


2. Go to Tools>Windows Deployment Services

kanager Server Manager			- 🗆 ×
Server Ma	anager • WDS	- 🍘 🚩 ма	anage <mark>Tools</mark> View Help
Dashboard Local Server All Servers File and Storage Services ▷ WDS	Server Name IPv4 Address Manageability	E ← (R) ← Last Update nce counters not started 4/4/2019 6/48:13	Component Services Computer Management Defragment and Optimize Drives Disk Cleanup Event Viewer iSCSI Initiator Local Security Policy PM 003 Microsoft Azure Services ODBC Data Sources (32-bit) ODBC Data Sources (32-bit) ODBC Data Sources (64-bit) Performance Monitor Print Management Resource Monitor Services System Configuration System Information Task Scheduler Windows Daployment Services Windows Daployment Services
			Windows Memory Diagnostic Windows PowerShell

3. Right click on Server>Configure Server







4. Integrate with AD

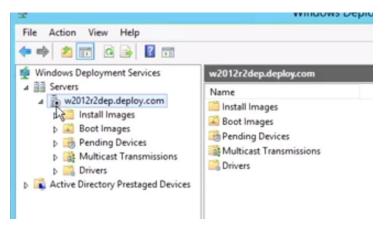
Ser	VICES I Windows Deployment Services	
ļ	🝨 Windows Deployment Services Configuration Wizard	\times
e	Install Options	
	Select one of the following options:	
	<u>∫</u> }	
	< Back Next >	Cancel

5. Configure the following:

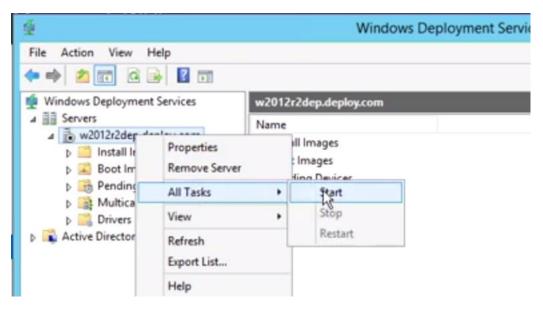
ervices	Windows Deployment Services
🝨 Windo	ws Deployment Services Configuration Wizard $ imes$
PXE Se	rver Initial Settings
the	can use these settings to define which client computers this server will respond to. Known clients are slients that have been prestaged. When the physical computer performs a PXE boot, the operating m will be installed based on the settings that you have defined.
Sele	ct one of the following options:
O	o not respond to any client computers
OF	Respond only to known client computers
• F	Respond to all client computers (known and unknown)
	Reguire administrator approval for unknown computers. When you select this option, you must approve the computers using the Pending Devices node in the snap-in. Approved computers will be added to the list of prestaged clients.
	< <u>B</u> ack <u>N</u> ext > Cancel

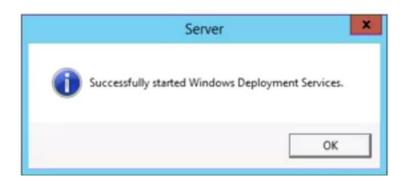


6. You should see the following:



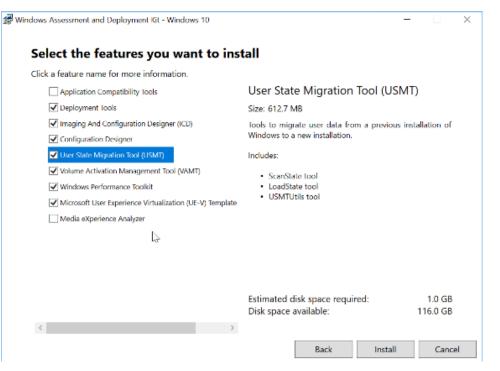
7. Make sure the service starts correctly:



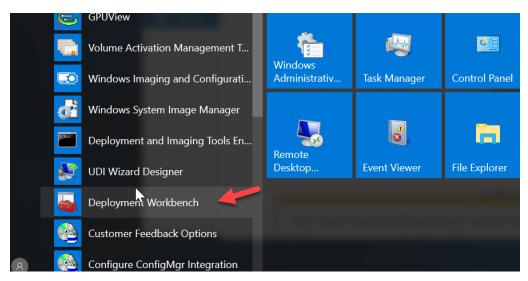




- Install MDT: <u>https://www.microsoft.com/en-us/download/confirmation.aspx?id=54259</u> and WADK: <u>https://docs.microsoft.com/en-us/windows-hardware/get-started/adk-install</u>
 - a. Download the Windows ADK for Windows 10, version 1809
 - b. Download the Windows PE add-on for the ADK
- 9. Run through Wizard
 - a. Configure the following for WADK:



b. Search for Deployment Workbench under the start menu to make sure everything installed correctly:





10. For the Windows PE installation wizard, specify Installation on this computer:

Spe	ecify Location				
W	istall the Windows Assessment and Deployment H lindows 10 to this computer	Kit Windows Preinstallation E	nvironment Ado	d-ons -	
	Install Path: C:\Program Files (x86)\Windows Kits\10\			Brow	se
:	* Windows Kit common installation path used				
	* Windows Kit common installation path used ownload the Windows Assessment and Deploym /indows 10 for installation on a separate compute		on Environment	t Add-ons	; -
O Do W	ownload the Windows Assessment and Deploym		on Environment	t Add-ons	5 -
O Do W	ownload the Windows Assessment and Deploym /indows 10 for installation on a separate compute	er	on Environment	t Add-ons Brow	

11. Create new Deployment Share

a. In Deployment workbench>New Deployment share

DeploymentWorkbe File Action View	nch - [Deployment Workbench Help	ו]
 Deployment Workt Information Cei Deployment Cei 	nter	
> 🛃 Deployment	New Deployment Share	osoft Deplo
	Open Deployment Share	
	Refresh	icrosoft Deployi nce for automat
	Help	tandardizing des uration manage
		MDT supports deployi



b. Customize the following settings to your environment:

New Deployment Share Wizard		×	-	
Path			Share	
Path Share Descriptive Name Options Summary Progress Confirmation	Specify the location of the network share for this deployment type. Deployment share path: Deployment State	Browse	Path Share Descriptive Name Options Surmary Progress Confirmation	Specify the share name to be used with the specified local path. If the share already exists on this computer, it must point to the path specified for this deployment share. Share name: PeploymentShareS Full path UNC path: \\MDTTesting\DeploymentShareS
	Devicus Next	Cancel		Previous Next Cancel



New Deployment Share Wizard	×	
Descriptive N	ame	
Path Share Descriptive Name Options Summary Progress Confirmation	Specify a descriptive name for the deployment share. Deployment share description: IDT Deployment Share	
	Previous Next Cancel	



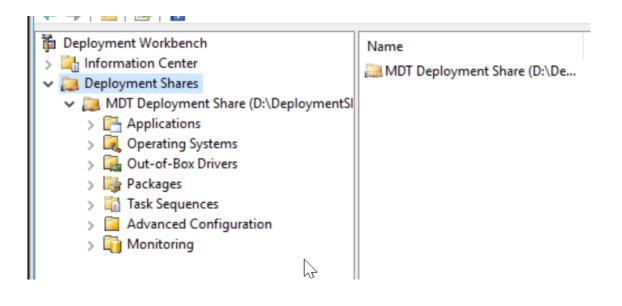
New Deployment Share Wizard	;
Options	
Path Share Descriptive Name Options Summary Progress Confirmation	When performing deployments, the behavior of the Deployment Wizard can be customized by turning various wizard panes on or off. For those that are not desired, modify the defaults below as appropriate. Ask if a computer backup should be performed. Ask for a product key. Ask to set the local Administrator password. Ask if an image should be captured. Ask if BtLocker should be gnabled.
	These settings can be changed later by modifying the rules defined for the deployment share.
New Deployment Share Wizard	×
Path Share Descriptive Name Options Summary Progress Confirmation	All of the necessary details have been specified. Please review the values below. Details: Path: D:\DeploymentShare Upgrade: False ShareName: DeploymentShare\$ Description: MDT Deployment Share Ask about Backup: True Ask for Product Key: False Ask about Image Capture: True Ask about BtLocker: True
	Click next to execute the requested action.



c. Click View Script to get a custom powershell script you can use to implement the same settings to other customers:

New Deployment Share Wizard	×	
Path Share Descriptive Name Options Summary Progress Confernation	The process completed successfully. Desting share: Deployment:Share's 'with path: 'D:'Oeployment:Share'. Share created successfully. Performing the operation 'New' on target 'Name: DS001 Provider: MicrosoftDeployment Toolkit.VMI Performing the operation 'New' on target 'Ageloyment share''. Preforming the operation 'Open' on target 'Ageloyment are ''. Performing the operation 'Open' on target 'Ageloyment are ''. Deployment share at 'D: Deployment Share'. Deployment share at 'D: Deployment Share'. Successfully added MDT drive DS001 to the pensisted drive list.	DeploymentWorkbench - [Deployment Workbench/Deployment Shares] File Action View Help The DeploymentShares DeploymentShareS DeploymentShareS DeploymentShareS DeploymentShareS DeploymentShareS Postor Import-Module "C:\Program Files/MircosoftDeploymentToolkitLbin/MircosoftDeploymentToolkit.psd1" new-PSDFive -Name "DS001" -PSProvider "MOTProvider" -Root "D:\DeploymentShareS -NetworkPath "\\MOTTesting\DeploymentShareS" -Verbose add-MOTPersistentDrive -Verbose
	Save Output	

d. You will now see the following:

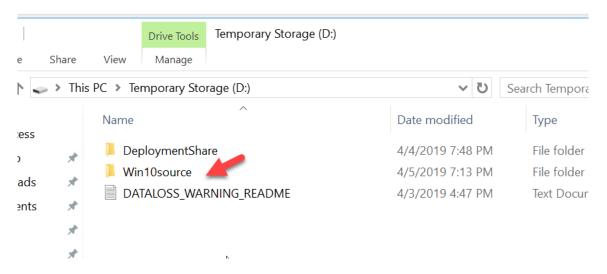




Import Your OS

1. Add your OS to the Deployment Workbench

a. Go to File Explorer and create a new Folder in your D: drive called Win10Source



b. Copy the files from the DVD drive from part one of this document and paste them into this folder:

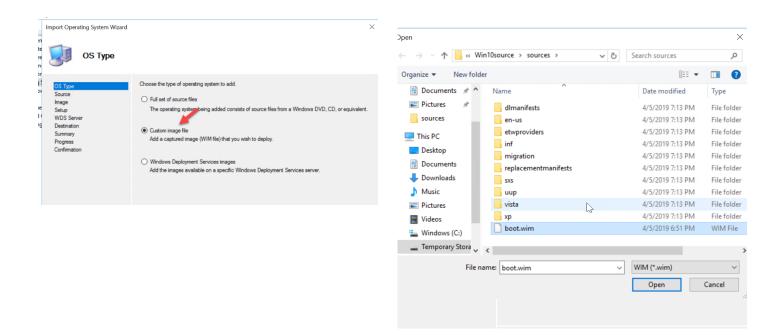
ਢ lome Sha	Drive Tools DVD Drive (F:) ESD-ISO		_
	This PC > DVD Drive (F:) ESD-ISO >	v U	Search DVD Drive (F
access	Name	Date modified	Туре
top	🖌 📙 boot	3/12/2019 8:16 AM	File folder
	📕 efi	3/12/2019 8:16 AM	File folder
	sources	4/5/2019 6:55 PM	File folder
	* 📜 support	3/12/2019 8:16 AM	File folder
res	🖈 🔬 autorun	3/12/2019 8:09 AM	Setup Informat
ces	* 📄 bootmgr	3/12/2019 8:09 AM	File
5	📄 bootmgr.efi	3/12/2019 8:09 AM	EFI File
top	🥌 setup	3/12/2019 8:09 AM	Application
uments			
nloads			
с			
ires			



c. Right click on Operating Systems>Click Import Operating System

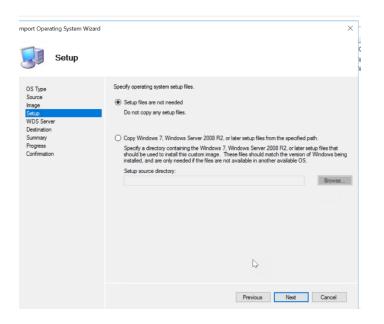
PeploymentWorkbench - [Depl	oyment Workbench	Deployment Sha	ares\MDT Deployment Share (D:\DeploymentShare)\Operating Systems]
File Action View Help			
🗢 🔿 🖄 🗟			
i Deployment Workbench		Name	Description
> 🔚 Information Center			
✓ Deployment Shares			There are no items to show in this view.
MDT Deployment Share	e (D:\DeploymentSl		
> 📑 Applications			
Qperating Systems		-	
> 🛃 Out-of-Box Dri	Import Operating	System	
> 🙀 Packages	New Folder	~	
> 📑 Task Sequence	View	>	
> Advanced Con		· · · ·	
> 🏹 Monitoring	Refresh		
	Export List		
	Help		
1			

d. Choose Custom Image file and choose the boot.wim file we moved into the D: Drive:





e. Set up files are not needed:



f. Continue till completion:

🖀 DeploymentWorkbench - [Deployment Workbench\Deployment Shares\MDT Deployment Share (D:\DeploymentShare)\Operating Systems]

Deployment Workbench	Name	Description	Platform	Build
Information Center	-			
Deployment Shares	Microsoft Windows PE (x64) in Upgrade Win 10 bo		х64	10.0
 Deployment Shares MDT Deployment Share (D:\DeploymentS) 	📌 Microsoft Windows Setup (x64) in Upgrade Win 10	Microsoft Windows Setup (x64)	х64	10.0
> 🚰 Applications				
Qperating Systems				
> 🖳 Out-of-Box Drivers				
> 🎲 Packages				
🔚 Task Sequences				
> 🧧 Advanced Configuration				
> 🛅 Monitoring				



Create a New Task Sequence

1. Create a new task Sequence

a. Go to Task Sequence>New Task Sequence

DeploymentWorkbench - [File Action View Help		I\Deploy	ment Shares\MIUL Deployment St	nare (D:\Deployment
		Name	_	ID There are i
> 🦲 Advanced (
> 🛅 Monitoring New Folder				
	View	>		
	Refresh Export List			
	Help			

b. Define the ID and Name:

New Task Sequence Wizard	×
General Setti	ings
General Settings Select Template Select OS Specify Product Key OS Settings Admin Password Summary Progress Confirmation	Specify general information about this task sequence. The task sequence ID is used internally as part of the deployment process. The task sequence name and comments are displayed by the deployment wizard. Task sequence ID: Win10v1 Task sequence name: Windows 10 Pro Upgrade Task sequence comments:
	Previous Next Cancel



c. Leave the following:

New Task Sequence Wizard General Set	tings
General Settings Select Template Select OS Specify Product Key OS Settings Admin Password Surmary Progress Confirmation	Specify general information about this task sequence. The task sequence ID is used internally as part of the deployment process. The task sequence name and comments are displayed by the deployment wizard. Task sequence ID: Win 10v1 Task sequence name: Windows 10 Pro Upgrade Task sequence comments:
	Previous Next Cancel

d. Choose the OS you added in the previous section:

Select OS General Settings Select Template Select OS Specify Product Key OS Settings Admin Password Summary Progress	The following operating system images are available to be deployed with this task sequence. Select the one to use.
Confirmation	



e. Do not specific a product key:

	New Task Sequence Wizard
Specify Proc	duct Key
General Settings Select Template Select OS Specify Product Key OS Settings Admin Password Summary Progress Confirmation	 Do not specify a product key at this time. A product key is not required when deploying Windows 7, Windows Server 2008 R2, or later OS versions, or if the product key will be specified at deploy time using the wizard or a nule. Specify a multiple activation key (MAK key) for activating this operating system. In order to activate, each computer deployed using this MAK key will need to contact the Microsoft activation service on the internet. This is only supported for Windows 7 and later operating systems when using volume locense media. MAK Product Key: Specify the product key for this operating system. Specify a retail product key. (Note that retail keys can only be used to activate a single machine.) Product Key:
	Previous Next Cancel

f. Enter your custom settings:

New Task Sequence Wizard	
OS Settings	
General Settings Select Template Select OS	Specify settings about this task sequence. These settings will be used for all deployments of this task sequence, unless overridden during the deployment process using the wizard or a rule.
Select US Specify Product Key	Full Name:
OS Settings	UpgradeWin10
Admin Password	
Summary	Organization:
Progress	Wrajrecords
Confirmation	
	Internet Explorer Home Page:
	www.google.com
N	
G	
	Previous Next Cancel



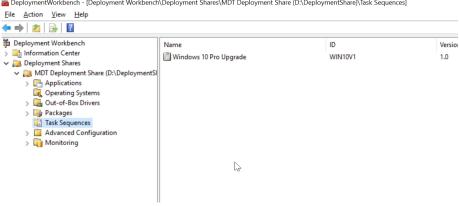
g. Specify the admin password:

h. You will see your summary page:

Summary	
General Settings Select Template Select OS	All of the necessary details have been specified. Please review the values below. Details:
Specify Product Key OS Settings Admin Password Summary Progress Confirmation	TaskSequenceID: Win10v1 TaskSequenceName: Windows 10 Pro Upgrade IsUpgradeTS: False Template: Custom.xml
	Olick next to execute the requested action. $\label{eq:constraint} \bigcup$
	Previous Next Cancel

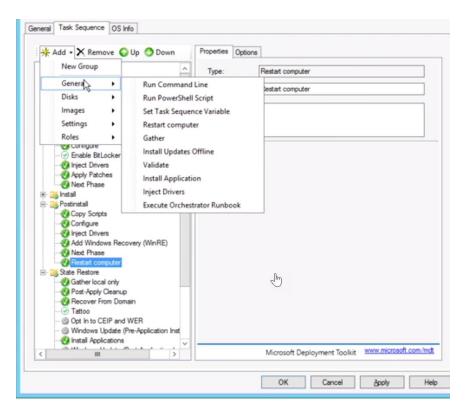


i. Click Finish to see the following:



🚡 DeploymentWorkbench - [Deployment Workbench\Deployment Shares\MDT Deployment Share (D:\DeploymentShare)\Task Sequences]

You can configure additional settings by right clicking on the task sequence and going to j. properties:





Create MDT Deployable Image

1. Crete a Deployable Image:

iii Task S ≽iii Advar

> 🛅 Monit

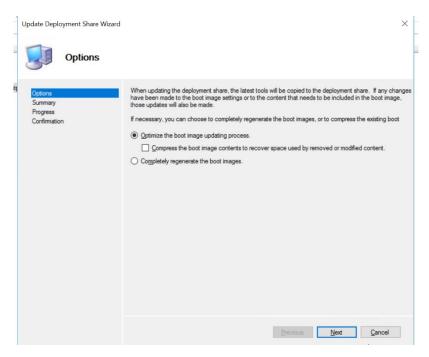
a. Right click on your deployment share and select Update Deployment Share

🚾 DeploymentWorkbench - [Deployment Workbench\Deployment Shares\MDT Deployment Share (D:\DeploymentShare)] File Action View Help 🗢 🔿 🖄 🗟 🛛 in Deployment Workbench Name > 🕌 Information Center Applications ✓ Deployment Shares Concrating Systems 🗸 🚬 MDT Dep Update Deployment Share of-Box Drivers > 📑 Applic Close Deputyment Share ages 🔍 Opera Sequences View > nced Configuration > 🄤 Packa Refresh toring

b. Choose the following:

Export List...

Properties Help





c. Complete till wizard completion:

Progress		
Options Summary Progress Confirmation	Mounting WIM file.	
	=== Processing LiteTouchPE (x86) boot image === Building requested boot image profile. Determining if any changes have been made in the boot image configure No existing boot image profile found for platform x86 so a new image will Calculating hashes for requested contrart. Changes have been made. boot image will be updated. Windows PE WIM C:\Program Files (x86)\Windows Rts\10\Assessment	be created.
	- Ling	Stop Execution
	Previous	Finish Cancel

d. If you got to your Deployment share in your D: Drive>Deployment Share>Boot>x86, you will see you .WIM file now

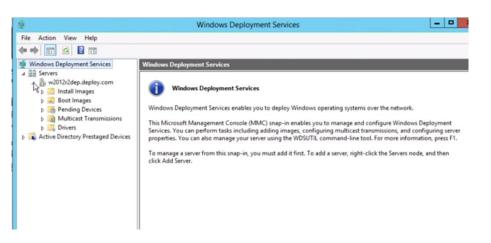
↑] « т	Temporary Storage (D:) > DeploymentShare > Boot	ٽ ~	Search Boot	م	MDT De	
ccess	Name	Date modified	Туре	Size	Up	
op 🛪	x64	4/6/2019 5:56 PM 4/6/2019 5:53 PM	File folder File folder		Vie	
loads 🛪 nents 🛪	LiteTouchPE_x64	4/6/2019 5:59 PM	Disc Image File	376,6		
es 🛪	LiteTouchPE_x64.wim	4/6/2019 5:59 PM 4/6/2019 5:59 PM	WIM File XML Document	334,3	📑 Exp	
S	LiteTouchPE_x86	4/6/2019 5:56 PM	Disc Image File	305,4	? He	
source ws 10 ISO	LiteTouchPE_x86.wim	4/6/2019 5:56 PM 4/6/2019 5:56 PM	WIM File XML Document	263,8		
WS 10150		1, 0, 2010 0100 1111				
op	N	4,0,2013 5.301 1		L		



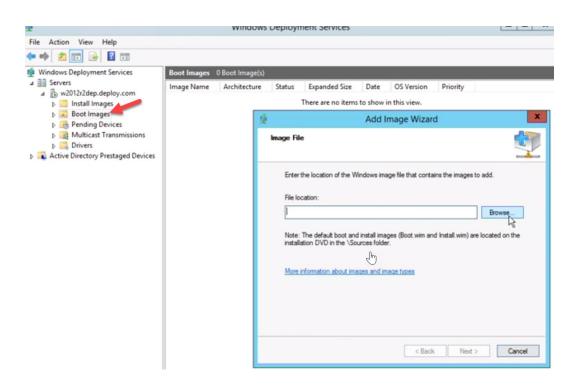
Add Boot Images to WDS

1. Open WDS

a. Server manager>Tools>Windows Deployment Services



b. Right Click Boot Images>Add Boot Image





c. Find the WIM file under D: Drive>Deployment Share>Boot>x86

		Select Windows Image	File			×
🖯 💿 🔹 🕇 🍺 🖉	New V	olume > DeploymentShare >	v C	Search Deployme	entShare	P
Organize 🔻 New fo	lder)III • 🔟	0
Desktop	^ 1	Name		Date modified	Туре	
bownloads		JE SOEMS		10/17/2015 6:47 PM	File folder	
Recent places		J Applications		10/17/2015 6:47 PM	File folder	
T1: 00		😹 Backup		10/17/2015 6:48 PM	File folder	
This PC		🗼 Boat		10/17/2015 7:08 PM	File folder	
Desktop		🕌 Captures		10/17/2015 6:47 PM	File folder	
Documents	=	3 Control		10/17/2015 6:52 PM	File folder	
Music		🕌 Operating Systems		10/17/2015 6:47 PM	File folder	
Pictures		🕌 Out-of-Box Drivers		10/17/2015 6:47 PM	File folder	
Videos		🎉 Packages		10/17/2015 6:47 PM	File folder	
Local Disk (C:)		👪 Scripts		10/17/2015 6:47 PM	File folder	
New Volume (D:		🎳 Servicing		10/17/2015 6:53 PM	File folder	- 1
Ca New Yolume (D:		🍌 Templates		10/17/2015 6:47 PM	File folder	
	~ <					>
F	ile name	r.	,	Windows image	files (*.wim)	~
				Open	Cancel	

Deploy the Windows 10 Image

- 1. Verify Configuration Settings in WDS
 - a. Right Click on your Deployment share, click Properties, then go to sharing

> Th					
	is PC + New Volume (D:)		v C S	earch New V
	Name	•	Date modified	Туре	Size
	JeploymentShar		DeploymentShare Prop	COCCUPIE LINE COCCUPIES AND	×
ls	iso iso		oepioymentanare riop	erues	_
ices	RemoteInstall W2012R2Source	General Shar	ing Security Previous Version	e Customize	
	in 10Source	1.7	Deployment Share]
ts		Type:	File folder		
s		Location:	D:\		
		Size:	4.96 GB (5,330,927,906 bytes)		
		Size on disk:	4.96 GB (5,335,687,168 bytes)		
: (C:) me (D:)		Contains:	2,404 Files, 399 Folders		
110 (0.)		Created:	Saturday, October 17, 2015, 6	47:21 PM	
		Attributes:	Read-only (Only applies to f	iles in folder)	
		R	Hidden	Advanced	
	Ð				
selected					



b. Go to Advanced Sharing

General	Sharing	Security	Previous Versions	Customize
Network	k File and	Folder St	haring	
	Deploy	mentShar	0	
10	Shared	đ		
	k Path:	D D in		
_		P \Deployr	nentShare\$	
Shi	are			
Advanc	ed Shari	na		
		nissions, c	reate multiple shares	, and set other
		-		, and set other
advand	ed sharin	nissions, c		, and set other
advand	ed sharin	nissions, c ng options		, and set other
advand	ed sharin	nissions, c ng options		, and set other
advand	ed sharin	nissions, c ng options		, and set other
advand	ed sharin	d Sharing		, and set other
advand	ed sharin	nissions, c ng options		, and set other

c. Click on permissions and make sure you have the correct Administrators with full control:

	r DeploymentShare\$
Share Permissions Group or user names:	
Permissions for CREATOR OWNER Full Control Change Read	Add Remove Missw Deny C C C C C C C C C C C C C C C



d. Right Click on the Server>Click Properties>Click Advanced:

Windows Deployment Services	Boot Images 2 Image Name	Boot Image(s) Architecture	Sta		W2012R2DEP Pr	roperties	_	
a b w2012r2dep.deploy.com b c Boot Images b c Boot Images b c Boot Images b c Boot Images b c Wulticast Transmissions b c Drivers Active Directory Prestaged Devices	Dite Touch	x86	Ont Ont	Multicast General PXE Re W2012R2DE Computer name: Remote installation folder: Server mode:			Clent .	TFTP DHCP

e. Authorize the following:

General	PXE	Response	AD DS	Boot	Client	DHCF
Multicas	st	Advan	ced	Network		TFTP
Domain C	ontroller					
Allow doma	Window in server	vs Deploymen rs (recommen	t Services to d ded)	lynamically di	scover valk	ł
() Wind	ows Dep	ployment Serv	ices should us	e the followin	g servers:	
Doma	ain contr	roller:			Browse	
Globa	al catalo	g:			Browse	1
DHC	ot author P	rize this Words	ows Deployme ployment Serv			
O Do no DHC	ot author P	rize this Words				
O Do no DHC	ot author P	rize this Windows De	ployment Serv			
O Do no DHC	ot author P	rize this Windows De	ployment Serv			
O Do no DHC	ot author P	rize this Windows De	ployment Serv			
O Do no DHC	ot author P	rize this Windows De	ployment Serv			



End-User Experience

We first want to test out the deployment with our 2 pilot devices. When we boot them up, it will PXE boot onto the system, and the user will be prompted to press f12 for a network service boot.

a. From there they will be asked to choose the boot image:

		Windows Windows	-				>
LI	te Toucr	window	S PE (x64)			
					- 100		
	files.						

b. Run the deployment wizard:

Welcome	
	tun the Deployment Wizard nstall a new Opertiting System
	Run the Microsoft Deployment Wizard to install an Operating System or perform other task.
0	Exit to Command Prompt
	Ð
Keyboard Layout U	ited States 🗸
Configure Static IP	Configure with Static IP Address



c. Define the deployment share path that you copied when you first configured the deployment share in MDT

👙 Microsoft Deployment Toolkit	
🔎 Deployment Share	
Specify which deployment share to use.	
Before this wizard can continue, it will need to know the path	of a Deployment Share.
Deployment Share: (format: "Server\share" or "\\server"	×
[VI	^
- In)
	Back Next Cancel

d. Add your credentials:

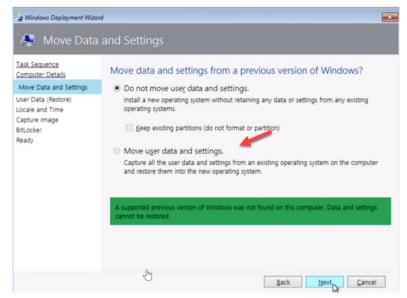
🕲 User Credentials				
Specify crea	dentials for User Name: Password: Domain:	connecting to administrator	network sh	ares.
				<u>OK</u>



e. Choose the appropriate settings here based on your environment:

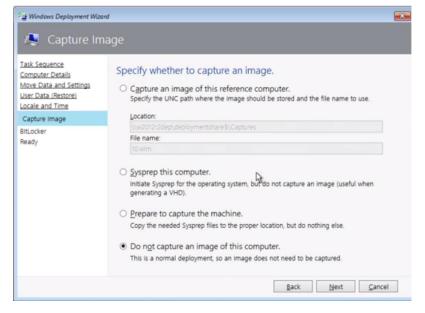
🐴 Windows Deployment Wizard	đ	×
🥵 Computer D	Details	
Task Sequence Computer Details Move Data and Settings User Data (Restore) Locale and Time Capture Image BitLocker Ready	Computer name: MININT-7LIHKNA × Computer name: Comp	
	User Name: administrator Password: Domajn: deploy Join a workgroup. Workgroup: WORKGROUP	
	<u>B</u> ack Next	Cancel

f. Move User data and settings:





g. Do not capture the image:



h. Choose whether or not to enable BitLocker

🐴 Windows Deployment Wiza	rđ		3
itLocker 🥵			
Task Sequence Computer Details Move Data and Settings User Data (Restore) Locale and Time Capture Image BitLocker	Specify the BitLocker configuration. BitLocker can be enabled to provide an additional level of dat	a security for this computer.	
Ready	 Enable BitLocker using TPM only. Enable BitLocker using TPM and Pin. Enable BitLocker using TPM and a startup key. Enable BitLocker using only an External Startup Key. Enable BitLocker using only an External Startup Key. In Active Directory Do not create a recovery key. (Not recommended) Wait for Bitlocker Encryption to complete on all drive 		ŋ
	Ba	k <u>N</u> ext <u>C</u> ancel	

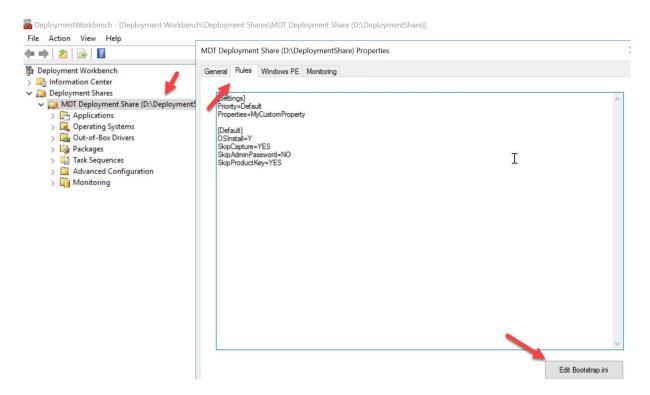


i. Copy the details that you created. We will be using these for our broad deployment so end-users do not have to configure all of the info

<u>lask Sequence</u> <u>Computer Details</u> Move Data and Settings	Ready to begin. Using the information you provided, the deployment can now begin.
User Data (Restore) Locale and Time	A Details
Capture Image BitLocker	TSGuid = "Win10Dep" DeploymentType = "N_WCOMPUTER"
Ready	OSDDiskPartitionStyle = "WINIOADVANCED" OSDDcomputerName = "MININT-TLTHKNA" DomainAdmin = "administrator" DomainAdminDomain = 'deploy" JoinWorkgroup = "WORKGROUP" USKTOfflineMigration = 'FALSE" UserDatalocation = "NONE" UILanguage = "en-us" UserLocale = "en-us" UserDatale = "en-us" UserDatale = "en-us" UserDatale = "en-us" UserDatales = "en-us" UserDatales = "Central Standard Time" DoCapture = "NO" BédentalSuppress = "YES"

BROAD DEPLOYMENT:

j. Back in the Deployment workbench, right-click on your deployment share>Properties>Rules>Edit Bootstrap.ini

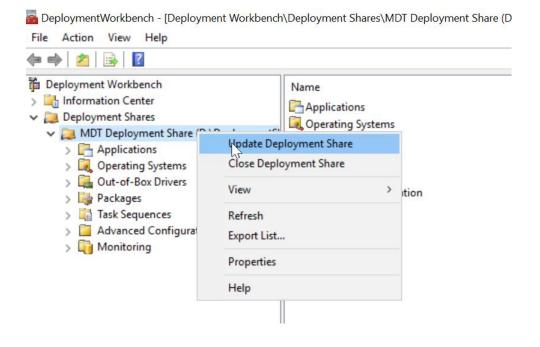




	Bootstrap - Notepad
1	le Edit Format View Help
1	Settings] riority=Default
	Default]
	Ŧ
	I

k. Paste in your configuration we copied in step "n" under {Default]

L. Update the deployment share to add this configuration





m. When you are ready for broad deployment, go back to WDS>Right-click on your server>Properties>Boot>And click Continue the PXE Boot:

File Action View Help	MDTTESTING	Properties	s			>	
4 W 1 D 1 0 0	Multicast Advanced		Network TFTP		TFTP		
 Windows Deployment Services Servers 	General	PXE Response	AD DS	Boot	Client	DHCP	
 MDTTesting.wrajrecords.com Install Images Boot Images Pending Devices Multicast Transmissions Drivers Active Directory Prestaged Device 	After a network boot is initiated, define when a PXE boot will continue. Known clients: Require the user to press the F12 key to continue the PXE boot Always continue the PXE boot Continue the PXE boot unless the user presses the ESC key Never continue the PXE boot Unknown clients: Require the user to press the F12 key to continue the PXE boot Always continue the PXE boot Continue the PXE boot Continue the PXE boot Never continue the PXE boot 						

n. With these settings configured, all of the users in your environment will get the image pushed to them without having to press f12 or run through the wizard of setting like we did for out pilot users



Conclusion

I hope this article provided you some targeted guidance on deploying the Windows 10 upgrade across your network. Any feedback to improve your experience would be greatly appreciated. I would also like to hear if there is more content that you would like to see in this guide. Any feedback can be sent to my email below:

Nick Ross | Solutions Engineer <u>nross@pax8.com</u> Direct Line: 720-577-4566



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