

Microsoft® Deployment Toolkit 2010 Update 1

What’s New in MDT 2010 Update 1?

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Contents

[Introduction to What’s New in MDT 2010 1](#_Toc265782878)

[Feedback 1](#_Toc265782879)

[Changes in MDT 2010 Update 1 2](#_Toc265782880)

[What’s New in MDT 2010 Update 1? 2](#_Toc265782881)

[Support for Upgrading from Previous Versions of MDT and BDD 2](#_Toc265782882)

[Support for UDI Deployments 2](#_Toc265782883)

[Improvements for LTI Deployments in MDT 2010 Update 1 3](#_Toc265782884)

[Improvements for ZTI Deployments in MDT 2010 Update 1 4](#_Toc265782885)

[What’s Been Removed in MDT 2010 Update 1? 5](#_Toc265782886)

[Changes in MDT 2010 6](#_Toc265782887)

[What’s New in MDT 2010? 6](#_Toc265782888)

[What’s Been Removed in MDT 2010? 9](#_Toc265782889)

[Operating System Support in MDT 2010 Update 1 10](#_Toc265782890)

[Windows AIK Support in MDT 2010 Update 1 11](#_Toc265782891)

# Introduction to What’s New in MDT 2010

Microsoft® Deployment Toolkit (MDT) 2010 Update 1 is the next version of the Microsoft Solution Accelerator for operating system and application deployment. The purpose of this guide is to explain the changes in MDT 2010 Update 1 from MDT 2010 and in MDT 2010 from MDT 2008 Update 1.

This guide specifically discusses the MDT 2010 Update 1 release and assumes familiarity with previous MDT version concepts, features, and capabilities.

Note   In this document, Windows applies to the Windows® 7, Windows Vista®, Windows XP Professional, Windows Server® 2008 R2, Windows Server 2008, and Windows Server 2003 operating systems unless otherwise noted.

## Feedback

Please direct questions and comments about this guide to [satfdbk@microsoft.com](mailto:satfdbk@microsoft.com?subject=Microsoft%20Deployment%20Toolkit%202010).

Please provide feedback on the usefulness of this guide by filling out the survey at <http://go.microsoft.com/fwlink/?LinkID=132579>.

# Changes in MDT 2010 Update 1

MDT 2010 Update 1 has the same features as MDT 2010, with the exception of items listed in [What’s New in MDT 2010 Update 1](#_What’s_New) and [What’s Been Removed from MDT 2010 Update 1](#_What’s_Been_Removed_1) in this document.

## What’s New in MDT 2010 Update 1?

The new features in MDT 2010 Update 1 include the following:

* Support for Microsoft Office 2010
* Support for User Driven Installation (UDI) deployments for Microsoft System Center Configuration Manager 2007 with Service Pack 2 (SP2)
* Support for the Prestaged Media feature in System Center Configuration Manager 2007 R3 beta.
* Bug fixes and improvements for Lite Touch Installation (LTI) deployments.
* Bug fixes and improvements for Zero Touch Installation (ZTI) deployments.

### Support for Upgrading from Previous Versions of MDT and BDD

MDT 2010 Update 1 supports upgrading from the following versions of MDT and Microsoft Business Desktop Deployment (BDD):

* MDT 2010 RTW
* MDT 2008 Update 1
* BDD 2007 Update 2

Note   Create a backup of the existing MDT or BDD infrastructure before attempting an upgrade.

Note   MDT 2010 Update 1 does not support upgrading from MDT 2010 Update 1 beta to MDT 2010 Update 1 RTW.

### Support for UDI Deployments

The MDT 2010 release includes support for UDI deployments. UDI builds on the Operating System Deployment (OSD) feature in System Center Configuration Manager and uses the Operating System Deployment (OSD) Setup Wizard to customize deployment configuration settings. The following MDT 2010 Update 1 components have been added to support UDI deployments:

* Operating System Deployment (OSD) Setup Wizard. This wizard is initiated as a task sequence step in a System Center Configuration Manager task sequence. The wizard includes the following wizard pages that allow you to customize the deployment configuration settings:
* Welcome. Allows customization of the text displayed on the page and the banner graphic displayed on the page
* Preflight Checks. Allows readiness checks to be performed on the target computer prior to performing the deployment
* Computer. Allows the configuration of the target computer name, the domain or workgroup membership, and the credentials used for joining a domain
* User Configuration. Allows the configuration of the password for the Administrator local built-in user account and other accounts that will be members of the Administrators local built-in security group
* Language. Allows the selection of the languages to be installed, the time and currency formats, the keyboard layout, and the time zone for the target computer
* Volume. Allows the selection of the operating system image to deploy, the volume on the target computer where the image will be deployed, the existing Windows folder that is used for backing up user state, and if the target volume should be formatted
* Install Software. Allows the selection of applications to be deployed after the deployment of the target operating system finishes (The applications are selected from existing System Center Configuration Manager packages and programs.)
* Summary. Contains a list of the values chosen for the configuration settings while completing the wizard

Each of these wizard pages can be enabled, disabled, or set to silent to minimize the amount of information required for performing the deployment. When a wizard page is set to silent, the page will not be displayed to the user as long as all the variables for that page are set.

For each wizard page, many of the configuration settings can be assigned default values and be enabled or disabled accordingly. For more information, see "Running the Operating System Deployment (OSD) Setup Wizard" in Using the Microsoft Deployment Toolkit.

* UDI Wizard Designer. This console allows the customization of the Operating System Deployment (OSD) Setup Wizard. The console allows granular control of the wizard pages and configuration settings that can be changed by the person running the wizard. For more information, see "Managing UDI Deployments" in Using the Microsoft Deployment Toolkit.

### Improvements for LTI Deployments in MDT 2010 Update 1

* Improved driver import process. Some driver INF files incorrectly indicate that they support both the x86 and x64 platforms, but in reality they support only one of these platforms. MDT now has the ability to detect the true driver platform, overriding the value specified in driver INF files.
* Log gathering enhancements. Ability to copy additional log files to SLShare for troubleshooting. (See ZTIUtlilty.vbs for the complete list of log files being copied.)
* LTI Wizard performance improvement. The LTI Wizard now takes less time to initialize and shows up faster.
* Issue in validating connection to the server fixed. In a few scenarios, MDT 2010 used to report the error message, "A connection to the distribution share could not be made" when a task sequence is run. The Microsoft Support article, “Error message when you use MDT 2010: ‘Multiple connections to a server or shared resource by the same user, using more than one user name, are not allowed,’” at <http://support.microsoft.com/kb/977566> describes this issue in detail. This issue has been fixed in MDT 2010 Update 1.
* Issue in migrating user settings fixed. MDT 2010 uses the Windows User State Migration Tool (USMT) version 4 to migrate user data and settings. In MDT 2010, the Scanstate.exe process is not able to find the DLManifest folder; therefore, user settings were not migrated. In MDT 2010 Update 1, this issue has been fixed.
* Support for Federal Information Processing Standard (FIPS)–compliant algorithms for hashing. MDT 2010 Update 1 uses FIPS-compliant cryptographic algorithms for hashing functions.
* Many other small enhancements and bug fixes

### Improvements for ZTI Deployments in MDT 2010 Update 1

* Support for installing Windows 7 roles and features. MDT 2010 Update 1 adds support for installation of Windows 7 operating system roles and features.
* Looping issue with x64 custom Windows images fixed. In MDT 2010, ZTI–System Center Configuration Manager deployments could get into an infinite loop when deploying an x64 Windows image captured by LTI. This issue has been fixed in MDT 2010 Update 1.
* Offline language packs installation issue fixed. In MDT 2010, offline language packs are not installed for custom images. This issue has been fixed in MDT 2010 Update 1.
* System recovery is re-enabled after deployment. In MDT 2010, system recovery is disabled (SR=1) during deployment but not re-enabled (SR=0) at the end of deployment. This issue has been fixed in MDT 2010 Update 1.
* Error handling improvements in MDT task sequence templates. In MDT 2010, task sequences appear to finish successfully even when they really failed. These issues are fixed in MDT 2010 Update 1.
* Workaround for the USMT DLManifest issue implemented. User settings were not being migrated, as USMT was not able to find the DLManifest folder. The workaround for this issue is implemented in MDT 2010 Update 1.
* Configure ADDS and Configure DHCP bugs fixed. In MDT 2010, Configure Active Directory® Domain Services (AD DS) and Configure Domain Host Configuration Protocol (DHCP) actions fail on 64-bit server operating systems. This issue is fixed in MDT 2010 Update 1.
* Install Updates Offline and Install Language Packs Offline bugs fixed. In MDT 2010, the Install Updates Offline and Install Language Packs Offline steps used to fail when using an x86 boot image to deploy an x64 custom operating system. These issues are fixed in MDT 2010 Update 1.
* Many other small enhancements and bug fixes

## What’s Been Removed in MDT 2010 Update 1?

The MDT 2010 Update 1 release does not include the following features that existed in MDT 2010:

* None

# Changes in MDT 2010

MDT 2010 has the same features as MDT 2008 Update 1, with the exception of items listed in [What’s New in MDT 2010?](#_What’s_New_in) and [What’s Been Removed from MDT 2010?](#_What’s_Been_Removed) in this document.

## What’s New in MDT 2010?

The MDT 2010 release includes the following new features:

* Support for new deployment shares. MDT 2010 combines deployment points and distribution shares into deployment shares. A deployment share can be stored on a local drive, on a network shared folder, or on a stand-alone distributed file system (DFS) and does not have to be located on a specific computer. Just as with deployment points, deployment shares contain operating systems, applications, operating system packages, and device drivers.
* Improved management model. You can manage deployment shares from any computer that has the Deployment Workbench installed and has the appropriate NTFS file system permissions and network share permissions on the deployment share. You can open multiple deployment shares simultaneously in the Deployment Workbench.
* Support for selecting groups of items within the Deployment Workbench. Selection profiles in the Deployment Workbench allow you to select items in the deployment share that you can manage or apply as a unit. For example, you can create a selection profile that specifies the device drivers included for a specific make and model of target computers.
* Support for hierarchical management of items in deployment shares. You can create hierarchical folder structures in the Deployment Workbench to help organize and manage items such as operating systems, device drivers, and task sequences in deployment shares. This hierarchical structure allows you to include groupings of items in selection profiles.
* Support for linked deployment shares. Linked deployment shares are specialized deployments shares that you create using a selection profile in an existing standard deployment share. The content of the standard deployment share is replicated to the Universal Naming Convention (UNC) path specified for the deployment share. The content in the linked deployment shares can be replicated any time the content in the source deployment share changes. For more information about linked deployment shares, see the section, “Manage Linked Deployment Shares,” in the MDT 2010 document, Using the Microsoft Deployment Toolkit.
* Improved performance for replicating linked deployment shares. Linked deployment shares can be opened in single user mode, which dramatically improves the performance of replicating linked deployment share content. For more information configuring linked deployment shares for single user mode, see the section, “Modify an Existing Linked Deployment Share in Deployment Workbench,” in the MDT 2010 document, Using the Microsoft Deployment Toolkit.
* Improved database support. The Deployment Workbench supports the ability to dynamically display columns that are added to the MDT database (MDT DB). If you add a new column to the tables or views in the MDT DB, the Deployment Workbench automatically displays the new column.
* Support for drag-and-drop, copy-and-paste, and cut-and-paste operations in the Deployment Workbench. You can copy or move items in the Deployment Workbench within the hierarchical folder structure in a deployment share or between deployment shares.
* Improved support for media-based deployments. You can create media for performing media-based deployments from existing deployment shares based on the criteria specified in a selection profile. The Deployment Workbench can create bootable Windows Imaging Format (WIM) and International Organization for Standardization (ISO) files that can be used in deployments to virtual and physical target computers. For more information about media deployment shares, see the section, “Manage MDT 2010 Deployment Media,” in the MDT 2010 document, Using the Microsoft Deployment Toolkit.
* Support for automation of management tasks using Windows PowerShell™ cmdlets. Most of the processing logic that was previously included in the Deployment Workbench has now been implemented in Windows PowerShell. The Windows PowerShell support allows for the automation of common management tasks and for using other user interfaces (UIs) to perform management functions. Most management actions exposed in the Deployment Workbench can be performed in Windows PowerShell scripts.
* Enhancements in task sequence steps and scripts. Task sequence steps and scripts now include improvements in diagnostics output, logging, network recovery logic, code formatting and structure, security, and Deployment Workbench wizard usability.
* Improved security support. MDT 2010 supports the ability to refresh machines that use BitLocker® Drive Encryption without decrypting the target hard disks when deploying the Windows 7 operating system and protecting confidential information, such as passwords, stored in MDT 2010 configuration files.
* Support for upgrading from previous versions of MDT and BDD. MDT 2010 supports upgrading from the following versions of MDT and BDD:
* MDT 2008 Update 1
* BDD 2007 Update 2

Note   Create a backup of existing MDT or BDD infrastructure before attempting an upgrade.

* Support for Windows 7. Deploy Windows 7 using MDT 2010.
* Support for Windows Server 2008 R2. Deploy Windows Server 2008 R2 using MDT 2010.
* Support for System Center Configuration Manager 2007 SP2. This version of System Center Configuration Manager is required to deploy Windows 7 and Windows Server 2008 R2.
* Support for Windows Automated Installation Kit (Windows AIK) version 2.0. Deployment of Windows 7 and Windows Server 2008 R2 using MDT 2010 requires the use of Windows AIK version 2.0.
* Support for Windows User State Migration Toolkit (USMT) version 4.0. USMT 4.0 is required to support Windows 7 deployments. Specifically, the following new features of USMT 4.0 are supported in LTI deployments:
* Support for USMT 4.0 hard-link migration. USMT 4.0 includes a new method of saving user state called hard-link migration. Hard-link migration creates a snapshot of current user data files before reinstallation, which keeps data in the same location on the disk while upgrading the system and rebuilds the links after Windows 7 is installed. Hard-link migration dramatically reduces the time required to migrate user state, because the data is never moved, which is faster than copying user data to another disk.
* Support for USMT 4.0 shadow copy. USMT 4.0 supports the ability to archive files that are in use by using the shadow copy feature in Windows 7 and Windows Server 2008 R2.
* Support for the Deployment Image Servicing and Management (DISM) tool. The new DISM tool (Dism.exe) allows for servicing offline images, mounting and unmounting WIM files, and customizing Windows Preinstallation Environment (Windows PE) boot images. The DISM tool replaces many of the tools in previous versions of the Windows AIK, including Package Manager (Pkgmgr.exe), the International Settings Configuration Tool (Intlcfg.exe), and the Windows PE command-line tool (PEimg.exe).
* Support for Windows PE version 3.0. Windows PE 3.0 is included as a part of the Windows AIK version 2.0 and is required to deploy Windows 7 and Windows Server 2008 R2 using MDT 2010.
* Support for the Boot Configuration Data (BCD) management tool. MDT 2010 uses the new BCDEdit command-line tool to manage BCD files. MDT 2008 Update 1 used the BitLocker Drive Preparation Tool (BdeHdCfg.exe) to manage boot configuration.
* Support for Windows 7 default disk partition configuration. In MDT 2010, the disk partition configuration for Windows 7 is similar to the BitLocker Drive Encryption disk configuration, where the operating system is installed on Disk 0, Partition 2, and the system partition is on Disk 0, Partition 1.

## What’s Been Removed in MDT 2010?

The MDT 2010 release does not include the following features that existed in MDT 2008 Update 1:

* Support for Microsoft Systems Management Server (SMS) 2003. MDT 2010 no longer supports performing ZTI deployments using Systems Management Server. All other deployment scenarios that were supported in MDT 2008 Update 1 are supported in MDT 2010.

# Operating System Support in MDT 2010 Update 1

Table 1 lists the operating system support that LTI and ZTI deployments provide in MDT 2010 Update 1.

Note   You can perform ZTI deployments only by using System Center Configuration Manager and MDT 2010 RTW and later. You can no longer perform ZTI deployments using Systems Management Server and MDT 2010, as support for Systems Management Server has been discontinued.

Table 1. MDT 2010 Update 1 Operating System Support

| Operating system | LTI | ZTI | UDI |
| --- | --- | --- | --- |
| Windows 7 | ● | ● | ● |
| Window Server 2008 R2 | ● | ● |  |
| Windows PE version 3.0 | ● | ● | ● |
| Windows Vista (with SP1 and later) | ● | ● |  |
| Windows Server 2008 (all service pack levels) | ● | ● |  |
| Windows XP (with SP3) | ● | ● |  |
| Windows Server 2003 R2 | ● | ● |  |
| Windows PE version 2.1 |  | ● |  |

● = supported

# Windows AIK Support in MDT 2010 Update 1

Table 2 lists the Windows AIK support that LTI and ZTI deployments provide in MDT 2010 Update 1.

Note   You can perform ZTI deployments only by using System Center Configuration Manager and MDT 2010. You can no longer perform ZTI deployments using Systems Management Server and MDT 2010, as support for Systems Management Server has been discontinued.

Table 2. MDT 2010 Update 1 Windows AIK Support

| Windows AIK | LTI | ZTI | UDI |
| --- | --- | --- | --- |
| Windows AIK version 2.0 | ● | ● | ● |
| Windows AIK version 1 |  | ● |  |

● = supported