

# Altiris™ Dell Toolkit (DTK) update in the Deployment Solution for Dell Servers from Symantec



# Altiris™ Dell Toolkit (DTK) update in the Deployment Solution for Dell Servers

The software described in this book is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

## Legal Notice

Copyright © 2012 Symantec Corporation. All rights reserved.

Symantec and the Symantec Logo, or Symantec trademarks used in the product are trademarks or registered trademarks of Symantec Corporation or its affiliates in the U.S. and other countries. Other names may be trademarks of their respective owners.

The product described in this document is distributed under licenses restricting its use, copying, distribution, and decompilation/reverse engineering. No part of this document may be reproduced in any form by any means without prior written authorization of Symantec Corporation and its licensors, if any.

THE DOCUMENTATION IS PROVIDED "AS IS" AND ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT SUCH DISCLAIMERS ARE HELD TO BE LEGALLY INVALID. SYMANTEC CORPORATION SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH THE FURNISHING, PERFORMANCE, OR USE OF THIS DOCUMENTATION. THE INFORMATION CONTAINED IN THIS DOCUMENTATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

Symantec Corporation  
350 Ellis Street  
Mountain View, CA 94043

<http://www.symantec.com>

# Contents

Chapter 1	Introduction to Dell Toolkit .....	5
	About DTK integration with DS for Dell .....	5
	Updating the Dell WinPE DTK .....	5
	Integrating Linux DTK with DS for Dell .....	6
Chapter 2	Updating DTK in DS for Dell 3.x .....	9
	Prerequisites to update DTK for DS for Dell 3.x .....	9
	Updating the Linux DTK in the DS for Dell 3.x .....	9
Chapter 3	Appendix .....	11
	X32 Modifications .....	11
	X64 Modifications .....	13



# Introduction to Dell Toolkit

This chapter includes the following topics:

- [About DTK integration with DS for Dell](#)
- [Updating the Dell WinPE DTK](#)
- [Integrating Linux DTK with DS for Dell](#)

## About DTK integration with DS for Dell

The **Dell OpenManage Deployment toolkit** includes a set of utilities, sample scripts, and sample configuration files that you need to deploy and configure Dell Server. The DTK builds script-based and RPM-based installation to deploy large number of computers on a pre-operating system environment. The process is reliable as it does not change the current deployment.

Deployment Solution (DS) for Dell servers consolidates the **Dell OpenManage Deployment toolkit** and Dell Update Packages (DUPs) with management features provided with Deployment Solution.

The DUP add-on to the DS for Dell and lets you remotely provision and manage the Dell servers.

You can manage the Dell servers by executing the preconfigured or generated deployment jobs that incorporate the **Dell OpenManage Deployment Toolkit**.

The DS for Dell server jobs are designed to run on any model of server that is supported by the Dell DTK. The deployment job automatically assigns the right tasks for the server model and operating system using the required Dell tool.

## Updating the Dell WinPE DTK

You can update WinPE DTK for the following version of DS for Dell:

- DS for Dell 3.x
- DS for Dell 6.x
- DS for Dell 7.x

#### To update WinPE DTK in DS for Dell

- 1 Download the most recent version of the WinPE DTK from Dell's Website.  
<http://www.support.dell.com>
- 2 Extract the contents of the DTK to a folder on the local computer.
- 3 Copy the **Dell** directory to the following default location of the computer on which the Notification server is installed:

```
C:\Program  
Files\Altiris\Deployment\BDC\bootwiz\oem\Dell\winpe\callback_actions\DTK
```

If DS for Dell is installed on a non-default location, then you can refer to the following registry key to retrieve the installation path of DS for Dell:

HKLM\Software\Altiris\Deployment\InstallDir. This directory provides path up to the BDC folder.

The Boot disk Creator, the BDC invokes `VPE_driverinst.bat` to install DTK tools or drivers into the DS `boot.wim`, the WinPE image.

This requires modifying `VPE_driverinst.bat`  
(`Dell\[x32|x64]\Drivers\winpe2.x\VPE_driverinst.bat`) to accommodate for some newly passed parameters and paths.

See “*Appendix*” on page 11.

These changes need to be made in both `VPE_driverinst.bat` files (from the x32 and x64 folders).

## Integrating Linux DTK with DS for Dell

The Linux DTK integration is accomplished by a script that automatically combines the DS for Dell Linux environment with the Linux DTK ISO environment.

This process creates the following files:

- Linux
- rootfs

The Linux and rootfs contain the modified DTK Linux environment so that the DS Linux agent properly executes it.

You can integrate the Linux DTK with the following versions of DS for Dell:

- DS for Dell 6.x
- DS for Dell 7.x

### To integrate the Linux DTK

- 1 LinuxConvert.sh is invoked with the following parameters.  
`Path_to_DTK_Linux_ISO, Altiris_rootFS`
- 2 Mount the Linux ISO and extract the SA.2 archive.
- 3 Mount the Altiris rootfs.
- 4 Copy the Altiris RC files into the extracted DTK Linux archive.
- 5 Modify the DTK Linux files, which are mostly RC scripts to allow setting of Static IP addresses.
- 6 Update path and profiles to include entries from the Altiris rootfs.
- 7 Replace Linux utilities from the DTK Linux environment with versions from the Altiris rootfs. This will enable the Altiris Agent to run on them.
- 8 The archive is closed up creating a new Linux environment that is a combination of the DTK Linux and Altiris Linux environments.
- 9 The output of the script are the following two files:
  - linux
  - rootfs

These two files are placed in the C:\Program  
Files\Altiris\Deployment\BDC\bootwiz\oem\DELL\Linux\x86\@dot@\





# Updating DTK in DS for Dell 3.x

This chapter includes the following topics:

- [Prerequisites to update DTK for DS for Dell 3.x](#)
- [Updating the Linux DTK in the DS for Dell 3.x](#)

## Prerequisites to update DTK for DS for Dell 3.x

To update DTK DS for Dell 3.x product, you require the following:

- Linux installation
- latest version of DS 6.9 Installation  
You need Linux `rootfs` file from your DS 6.9 installation.  
On DS 6.9, following is the default path to the Boot Disk Creator:  
`C:\Program Files\Altiris\Express\Deployment Server\bootwiz\`  
On DS 7.2, following is the default path to the Boot Disk Creator:  
`C:\Program Files\Altiris\Deployment\BDC\bootwiz\`

## Updating the Linux DTK in the DS for Dell 3.x

These steps were tested using Ubuntu 11.04 but should work with most Linux distributions.

### To update the DTK in the DS for Dell

- 1 Download the most recent version of the Linux DTK ISO from Dell's website at the following location:  
[www.support.dell.com](http://www.support.dell.com)
- 2 On your Linux Installation, place the following files in the same directory:
  - Linux DTK ISO
  - rootfs
  - rc.ds4DellAltiris
  - LinuxConvert.sh
- 3 Open up a terminal window and browse to the location where you copied the files.
- 4 Execute the following command without the quotation marks and substituting [Linux\_DTK\_ISO] with the name of the Linux DTK ISO file:  

```
sudo ./LinuxConvert.sh [Linux_DTK_ISO] rootfs
```
- 5 When complete, the script displays on the Linux terminal, the location where the output files have been placed. for example, /tmp/tmp.[random\_name]
- 6 Copy the contents of this folder *Linux* and *rootfs* to the following location in your DS installation, replacing existing files:  
...\\eXpress\\Deployment Server\\Bootwiz\\OEM\\Dell\\Linux\\x86\\@dot@
- 7 Regenerate all DS for Dell Linux preboot images

---

**Note:** Due to changes in the DTK or to DS or DS for Dell, modifications may need to be made to LinuxCovnert.sh for these steps to produce the desired results.

---

See “[Integrating Linux DTK with DS for Dell](#)” on page 6.

# Appendix

This chapter includes the following topics:

- [X32 Modifications](#)
- [X64 Modifications](#)

## X32 Modifications

Line Number	Modifications
40	Modify this line to set AIKTOOLS to a passed in parameter
-OLD	Set AIKTOOLS="C:\Program files\Windows AIK\Tools"
-NEW	Set AIKTOOLS=%3%
60	Add a new line, creating a variable to set the WIM image name
60+	Set WIMNAME=boot.wim
60+	(Add a new line, creating a variable to modify startup file. STARTNET.CMD will be overwritten by BDC, a line calling this new startup file will be added to STARTNET.CMD)
60+	Set STARTUPFILE=%WIMPATH%\boot\winload.exe
77	Modify line to accomadte new %WIMNAME% variable)

Line Number	Modifications
-OLD	%AIKTOOLS%\x86\imagex /mountrw %WINPEPATH%\WinPE.wim 1 %WINPEPATH%\mount\
-NEW	%AIKTOOLS%\x86\imagex /mountrw %WINPEPATH%\%WIMNAME% 1 %WINPEPATH%\mount\
129,30	(Modify these lines to accommodate new %STARTUPFILE% variable) -OLD echo echo Starting WMI Services >> %WINPEPATH%\mount\windows\system32\STARINEICMD
-NEW	echo echo Starting WMI Services >> %STARTUPFILE%
-OLD	echo net start winmgmt >> %WINPEPATH%\mount\windows\system32\STARINEICMD
-NEW	echo net start winmgmt >> %STARTUPFILE%
135	(Modify this line to accommodate new %STARTUPFILE% variable)
-OLD	echo X:\Dell\Hapi\hapint.exe -i -q -k DTK -p hapint >> %WINPEPATH%\mount\windows\system32\STARINEICMD
-NEW	echo X:\Dell\Hapi\hapint.exe -i -q -k DTK -p hapint >> %STARTUPFILE%
140	(Modify this line to accommodate new %STARTUPFILE% variable)
-OLD	echo drvload.exe X:\Dell\Toolkit\Tools\RAC4\rac4ser.inf >> %WINPEPATH%\mount\windows\system32\STARINEICMD
-NEW	echo drvload.exe X:\Dell\Toolkit\Tools\RAC4\rac4ser.inf >> %STARTUPFILE%
143,4	(Modify these lines to accommodate new %STARTUPFILE% variable)
-OLD	echo echo Starting RAC Service >> %WINPEPATH%\mount\windows\system32\STARINEICMD

Line Number	Modifications
-NEW	echo echo Starting RAC Service >> %STARTUPFILE%
-OLD	echo racsvc -install >> <del>%WINPEPATH%\mount\windows\system32\STARINETCMD</del>
-NEW	echo racsvc -install >> %STARTUPFILE%
146-8	(comment out these lines, they are unnecessary [but if kept, should be modified to accommodate %STARTUP% variable])
-OLD	echo cd X:\Dell\Toolkit\Tools >> <del>%WINPEPATH%\mount\windows\system32\STARINETCMD</del>
-NEW	REM echo cd X:\Dell\Toolkit\Tools >> %STARTUPFILE%
-OLD	echo cls >> <del>%WINPEPATH%\mount\windows\system32\STARINETCMD</del>
-NEW	REM echo cls >> %STARTUPFILE%
153	(Comment out this line, we do not want the image finalized yet, BDC will further modify the image)
-OLD	%AIKTOOLS%\PETTOOLS\peimg.exe /prep %WINPEPATH%\mount\Windows /f
-NEW	REM %AIKTOOLS%\PETTOOLS\peimg.exe /prep %WINPEPATH%\mount\Windows /f

## X64 Modifications

Line Number	Modifications
40	Modify this line to set AIKTOOLS to a passed in parameter
-OLD	Set AIKTOOLS="C:\Program files\Windows AIK\Tools"
-NEW	Set AIKTOOLS=%3%

Line Number	Modifications
60	(Add a new line, creating a variable to set the WIM image name)
60+	Set WIMNAME=boot.wim60+
60+	Add a new line, creating a variable to modify startup file. STARTNET.CMD will be overwritten by BDC, a line calling this new startup file will be added to STARTNET.CMD
60+	Set <del>STARTUPFILE=%WIMPEATH%\mount\windows\system32\STARTNET.CMD</del>
77	Modify line to accommodate new %WIMNAME% variable-OLD
-OLD	%AIKTOOLS%\x86\imagex /mounttrw %WINPEPATH%\WinPE.wim 1 %WINPEPATH%\mount\
-NEW	%AIKTOOLS%\x86\imagex /mounttrw %WINPEPATH%\%WIMNAME% 1 %WINPEPATH%\mount\126,7
126,7	Modify these lines to accommodate new %STARTUPFILE% variable
-OLD	echo echo Starting WMI Services >> %WINPEPATH%\mount\windows\system32\STARTNET.CMD
-NEW	echo echo Starting WMI Services >> %STARTUPFILE%
-OLD	echo net start winmgmt >> %WINPEPATH%\mount\windows\system32\STARTNET.CMD
-NEW	echo net start winmgmt >> %STARTUPFILE%
132	Modify this line to accommodate new %STARTUPFILE% variable
-OLD	echo X:\Dell\Hapi\hapint.exe -i -q -k DTK -p hapint >> %WINPEPATH%\mount\windows\system32\STARTNET.CMD
-NEW	echo X:\Dell\Hapi\hapint.exe -i -q -k DTK -p hapint >> %STARTUPFILE%

Line Number	Modifications
134-6	Comment out these lines, they are unnecessary [but if kept, should be modified to accommodate %STARTUP% variable])
-OLD	echo cd X:\Dell\Toolkit\Tools >> %WINPEPATH%\mount\windows\system32\STARTNETCMD
-NEW	REM echo cd X:\Dell\Toolkit\Tools >> %STARTUPFILE%-OLD
-OLD	echo cls >> %WINPEPATH%\mount\windows\system32\STARTNETCMD
141	Comment out this line, we do not want the image finalized yet, BDC will further modify the image
-OLD	%AIKTOOLS%\PETOOLS\peimg.exe /prep %WINPEPATH%\mount\Windows /f
-NEW	REM %AIKTOOLS%\PETOOLS\peimg.exe /prep %WINPEPATH%\mount\Windows /f

Rebuild all DS for Dell WinPE pre-boot images.

If using DS for Dell 7.x, you will also have to rebuild the DellPE.iso and WinPEx64.iso files located at the Deployment share. This can be done by executing the following commands from the command line:

```
C:\Program Files\Altiris\Altiris Agent\Agents\Deployment\Task
Handler\bootwiz\bootwiz.exe" -q -iso -os winpe2 -oem "DELL" -x86
"C:\Program Files\Altiris\Altiris Agent\Agents\Deployment\DellPE.iso"
-delete -task auto

"C:\Program Files\Altiris\Altiris Agent\Agents\Deployment\Task
Handler\bootwiz\bootwiz.exe" -q -iso -os winpe2 -oem "DELL" -x64
"C:\Program Files\Altiris\Altiris
Agent\Agents\Deployment\WinPEx64.iso" -delete -task auto
```

