

Dell OpenManage  
Deployment Toolkit  
Version 4.1

# Readme



# What's New

The new features for this release include:

- Added support for the following operating systems:
  - Red Hat Enterprise Linux 6.2 (64-bit)
  - Red Hat Enterprise Linux 5.8 (32-bit and 64-bit)
- Deprecated the following operating systems:
  - Red Hat Enterprise Linux 6.1 (32-bit and 64-bit)
  - Red Hat Enterprise Linux 5.7 (32-bit and 64-bit)

## Supported Systems

For a complete list of supported Dell PowerEdge systems, see the Dell Systems Software Support Matrix available at [support.dell.com/manuals](http://support.dell.com/manuals). On the Manuals page, click Software-> Systems Management -> Dell OpenManage Releases. Click the appropriate product version to access the Support Matrix.

## Supported Operating Systems

DTK utilities support Windows PE 2.0 (32-bit and 64-bit) and Windows PE 3.0 (32-bit and 64-bit). Using DTK utilities we can deploy the following Windows operating systems:

- Windows Server 2008 SP2 (32-bit and 64-bit)
- Windows Server 2008 R2 SP1

## Hardware and Software Requirements

Before beginning the deployment process, ensure that you have the following tools, software, and information ready to use or consult:

- Advanced knowledge of Windows.
- Windows Automated Installation Kit (AIK) to build Windows PE.
- An unzip utility.
- Working knowledge of Microsoft Remote Installation Services (RIS) and Automated Deployment Services (ADS) (including setting up of RIS and ADS environments), or any other third party deployment system or tool.
- Working knowledge of Windows Deployment Services (WDS) or any other third party deployment system or tool for Windows PE.
- A workstation with the following capabilities:
  - A writable CD/DVD drive and CD/DVD writing software
  - Network access
- A target system with a CD/DVD drive, if you are performing a local deployment or network access if you are performing a network deployment.
- All Deployment Toolkit utilities, sample scripts, and sample configuration files.
- All required Windows PE drivers, operating system drivers, and the Dell utility partition image file.
- A minimum BIOS version is recommended on some of the platforms for all the DTK options to work correctly. In general, it is good practice to use the latest ("n") version of BIOS firmware or the "n-1" version that is available on "support.dell.com." For more information see the Dell Systems Software Support Matrix available at [support.dell.com/manuals](http://support.dell.com/manuals).

# Installation

For complete installation and deployment instructions, see the "Dell OpenManage Deployment Toolkit User's Guide."

## Installation Prerequisites

Before extracting Deployment Toolkit components, ensure that you have:

- The Deployment Toolkit self-extracting installation file ("DTKX.X-WINPE-XX.exe")
- A Windows workstation that has at least 512 MB of RAM.

## Installation and Configuration Notes

- The sample scripts are provided as examples for customers who want to develop their own deployment process. Some customers may find that the scripts work well in their environment, while some customers may need to develop their own scripts entirely from scratch. Customers deploying multiple systems need to provide unique information for each server when appropriate. For example, system host names, IP addresses, and system service tags need to be unique for each system. The batch scripts and configuration files need to be modified to reflect the unique information for each system being deployed. Many options are available to optimize this process.
- Installation of Dell utility partition is not supported on Windows PE 2.0 and Windows PE 3.0.

## Upgrade

When upgrading from a previous release of the DTK, ensure that you create environment for the new DTK version separately from the previous version of DTK. This step is necessary because the environments and requirements for the new DTK versions are completely different.

# Tool Notes

## SYSCFG

- Some options may not be present on all systems, which may be due to the BIOS version or hardware feature set. The usage information generated by running SYSCFG without arguments shows only those options that are valid for your system.
- The "--devseq" option is present only if you have an available, bootable hard-disk partition. If this option is present in the configuration file, but not present on your system, you will receive a usage error.
- It is required to perform a warm reboot after applying the syscfg settings changes on Dell PowerEdge yx2x systems.
- If you perform operations that change the "--redmem" option, reboot your system immediately. This is applicable to both command-line and "--infile" usage.

NOTE: The "--redmem" option should not be issued with any other command and should be immediately followed by a system reboot. This note is important when you develop scripts that can alter the "--redmem" setting.

- For options that use text strings such as username, password, hostname, and community string, using characters such as <space>, "<", ">", "|", "=" on the command line can be misinterpreted by the command line parser and may cause errors. Use only alphanumeric characters to avoid these errors.

- If you set the username using the syscfg "username" option, SOL access for the corresponding user will be enabled by default. You can disable SOL access for a user using the "syscfg solaction --userid=<userid> --action=disable" command.
- The maximum reliably supported baud rates (--solbitrate) are:
- 57600 for PowerEdge x9xx systems without Dell Remote Access Controller 5 (DRAC 5).
- 115200 for PowerEdge x9xx systems with DRAC 5. If you enter an unsupported baud rate, you may receive an error, "Parameter out of range."

## RAIDCFG

- When creating virtual disks, the chunk (stripe) size is always in KBs. Do not specify any units of measure for the chunk size.
- When providing multiple physical disks for the "create virtual disk" command, do not separate the disks with spaces. For example, "-ad=1:4, 1:5" causes an error. The correct way to display multiple physical disks is "-ad=1:4,1:5,1:6."
- If you change the controller mode from SCSI mode to RAID mode, data loss may occur. Back up any data you require before changing the modes.

# Open Issues and Resolutions

## RAIDCFG Issues

- If you delete a virtual disk on PERC 4I/M on Windows PE, you need to reboot the system for the changes to take effect.
- You cannot delete a virtual disk on CERC SATA 2S when RAID 1 is created with the "--clear" option. The virtual disk can be cleared from the controller BIOS.
- Perform copy operations using the "XCOPY" command, because the DOS "COPY" command may fail when copying across a network share. The message "invalid file handle" may be displayed. This issue is specific to R805 and R900 systems and is an intermittent error that is usually caused by the network connection. If the problem persists, check your network settings.
- You can assign up to 10 Global Hotspares using Raidcfg. Use The Dell OpenManage Server Administrator Storage Management for assigning more than 10 Global Hot spares.
- SW RAID controllers S100 and S300 will not be detected in the Microsoft Windows Server 2003 with SP1 (32-bit).
- DTK does not support Non RAID (Volume) mode on S100/S300 controller.
- S300 controller Cachepolicy setting is "Not Applicable". Hence VD created with different cachepolicy settings from OROM utility will be displayed as "Not Applicable".
- On Dell PERC H310 controllers, conversion of a RAID Capable Disk to Non-RAID disk and vice versa is not supported using raidcfg.

## SYSCFG Issues

- In DRAC 5, the --virtualmedia and --vflash options do not work if there is an active virtual media session. Disconnect the virtual media using the DRAC GUI. Log into DRAC. Click Media > Virtual Media > Disconnect.
- The syscfg --bootseq command detects CD-ROM with SAS/SATA controllers as unk.emb.1.
- On R815, syscfg power --profile option allows to set to apc, though apc is not supported on R815. syscfg does not throw an error message.
- On Windows PE 3.0, when you run the syscfg command to list all available options, if you press CTR + C before the command fully executes, an error message is displayed. Click OK. You can ignore the message.
- The option for "powerctl," which is "softshutdown," does not work on Windows PE.
- The "--solbitrate" option in "solcfgparams" and the "--mgscommbitrate" option in "serialcfgparams" accept a baud rate of 57600, but tools such as "ipmish" and "solproxy" do not function at that baud rate for PowerEdge systems.
- The legacy attribute values enable/disable are also supported for 12G systems for backward compatibility. In future releases, these arguments might be deprecated. Try to use the values shown in help message for BIOS options for 12G server.

## RACADM Issues

- If you use virtual media to boot into Windows PE, executing certain RACADM commands may cause Windows PE to crash.
- After generating the rac configuration file using the "racadm getconfig -f <file\_name>" command, comment out the following properties in the configuration file before you update a configuration using the "racadm config -f <file\_name>" command:
  - #cfgRacTuneCtrlEConfigDisable=0
  - #cfgRacTuneLocalConfigDisable=0
- VLAN objects (cfgNicVlanEnable, cfgNicVlanId, and cfgNicVlanPriority) displayed using the local RACADM command "racadm getconfig -g cfgLanNetworking" or VLAN objects generated in the configuration file using the local RACADM command "racadm getconfig -f <file name>" do not contain the leading "#" symbol which indicates that they are read-only.

## Windows PE Installation Issues

- If virtual flash is enabled and does not contain a valid image (for example, if the virtual flash contains a corrupt or random image), you may not be able to install Windows 2000 or Windows 2003, locally or remotely. To fix this issue, install a valid image on virtual flash or disable virtual flash if it will not be used during the installation procedure.

- Running partcfg.bat may fail when virtual media is enabled. For the hard disk, partcfg.bat uses the driver letter "c:". When virtual media is enabled, sometimes, the virtual device gets assigned with the drive letter "c:" And, partcfg.bat execution fails. To run partcfg.bat successfully, either disable the virtual media or use the diskpart command to assign a free driver letter for partcfg.bat.

## Windows PE Issues

- Windows PE 2.0 and 3.0 for 64-bit do not support racadm.exe for DRAC 4.
- Windows 2008 64-bit cannot be installed using DTK with Windows PE 3.0. Use Windows PE 2.0 for installing Windows 2008 64-bit.
- When using the H200 driver provided in Windows PE 3.0 (64-bit), the diskpart command does not list the first virtual disk created. Download the latest driver from the support site at support.dell.com.
- Windows PE 3.0 does not support PERC 4 controllers.

## Global Support

For information on technical support, visit [dell.com/contactus](http://dell.com/contactus).

For information on documentation support, visit [support.dell.com/manuals](http://support.dell.com/manuals). On the **Manuals** page, click **Software ->Systems Management**. Click on the specific product on the right-side to access the documents.

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