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DELL(TM) SYSTEMS BUILD AND UPDATE UTILITY 1.0 README

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Version: 1.0
Release Date: October 2007

Description:

This Readme provides information about Dell Systems Build and Update Utility.

You can use Dell Systems Build and Update Utility to perform the following operations on your system:

- * install operating system
- * view hardware details
- * perform firmware update
- * create a custom repository
- * generate hardware configuration scripts

For the latest version of this Readme, see the Dell Support website at "support.dell.com."

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CRITICALITY

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3 = Optional

Dell recommends that you review specifics about the update to determine if it applies to your system. The update contains changes that impact only certain configurations, or provides new features that may or may not apply to your environment.

MINIMUM REQUIREMENTS
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This section provides information about the supported systems, operating systems, and system requirements for Systems Build And Update Utility.

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SUPPORTED SYSTEMS
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- * The following Dell PowerEdge systems are supported on the "Dell Systems Build and Update Utility" CD version 1.0: 440, 600SC, 650, 700, 750, 800, 830, 840, 850, 860, 1430, 1435, 1600SC, 1650, 1655MC, 1750, 1800, 1850, 1855, 1900, 1950, 1955, 2600, 2650, 2800, 2850, 2900, 2950, 2970, 4600, 6600, 6650, 6800, 6850, 6950, T105, R900, T600, R200, PV0100, PV0500, PV0600, and NX1950.

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SUPPORTED OPERATING SYSTEMS
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The following operating systems are supported:

- * Microsoft(R) Windows(R) 2000 Server (SP4)
- * Microsoft Windows Server(R) 2003, SBS (SP2, R2)
- * Microsoft Windows Server 2003 x86, x86_64 Edition SP2 and SP2 R2
- * Red Hat Enterprise Linux (version 4) for x86
- * Red Hat Enterprise Linux (version 4) for x86_64
- * Red Hat Enterprise Linux (version 5) for x86
- * Red Hat Enterprise Linux (version 5) for x86_64
- * SUSE (R) Linux Enterprise Server version 9, (SP3) x86_64
- * SUSE LINUX Enterprise Server version 10 x86_64
- * VMware ESX 3.0.2 (or later)

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SYSTEM REQUIREMENTS
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You should have a Dell system with:

- * Minimum memory of 512 MB
- * CD drive
- * DVD drive (for firmware updates)

NOTE: Hard drive requirements vary by operating system

RELEASE HIGHLIGHTS
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This is first release of a new product that combines major functionalities of three Dell products - Dell OpenManage Server Assistant (DSA), Dell OpenManage Deployment Toolkit (DTK) and Dell OpenManage Server Update Utility (SUU) - through a unified Graphical User Interface (GUI).

Major features provided by Systems Build and Update Utility are:

- Server OS Installation
- View Hardware
- Firmware Update
- Create Custom Repository
- Hardware Script Generation

Certain features can be used in one-to-one (source-to-target system) environment, whereas other features can be used in one-to-many (source-to-target system)environment.

INSTALLATION
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1. Insert the "Systems Build and Update Utility" CD into your system drive and reboot your system. If the system is supported by the CD, the "Boot Menu" screen displays. The "Boot Menu" screen contains the following options to boot your system:

- * "Dell Systems Build and Update Utility"
- * "Optical Media (CD/DVD) Check"
- * "Skip Optical Media (CD/DVD) Boot - Boot to Hard Drive"
- * "DTK Command Line Interface (Linux)"

2. When you select the "Dell Systems Build and Update Utility" option, the "Home" page for "Dell Systems Build and Update Utility" displays. From the "Home" page, you can access the Systems Build and Update Utility modules:

- * Server Operating System Installation
- * View Hardware Details
- * Firmware Update
- * Update Utility Creation
- * Hardware Configuration Scripting Tool

USER NOTES
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This section provides information to help enhance your experience with Systems Build and Update Utility.

GENERAL NOTES

- * The following languages are supported by Systems Build and Update Utility:
 - * English
 - * French
 - * German
 - * Spanish
 - * Simplified Chinese
 - * Japanese
- * See the "readme.txt" under the folder "/server_assistant/driver_tool" for all details on the driver extracting utility.
- * The utility partition does not have DOS-based RAID tools.
- * For operating systems such as ESX, the native Graphical User installation tool provided by the operating system installation media is used. Setting date and time zone in the Systems Build and Update Utility setup screen does not apply to ESX.
- * If the Systems Build and Update Utility GUI disappears and a blank screen is displayed, restart your system. This issue occurs if you right-click to open a new browser window (from the "Quick Reference Guide" window) and select "Quit" from the "File" menu.
- * In order to use the RAID configuration feature of Systems Build and Update Utility to configure RAID and install the operating system, the "Fast Initialization" parameter of the RAID controller must be set to "ON." This setting is the factory default of all RAID controllers.
- * Do not insert or remove any hot-swappable drives until the operating system is completely installed while using the "Systems Build and Update Utility" CD. The results may be unpredictable and the installation may fail.
- * Use local accounts for creating the Server Message Block (SMB) share on Windows on which the RPMs will reside for the network download feature.
- * Systems Build and Update Utility does not support the installation of tape or Fibre Channel drivers with the operating system installation. You can download the drivers for these devices from the "Dell Systems Service and Diagnostics Tools" CD, or from the Dell Support website at "support.dell.com."
- * The "Keyboard Type" locale option offered for a keyboard layout on

the Systems Build And Update Utility Home page is to navigate the Systems Build and Update Utility navigation only.

The selected keyboard layout setting is not passed to the installed operating system.

- * The Utility Partition created by Systems Build and Update Utility contains diagnostic utilities for your system. On rare occasions, incompatibilities between disk firmware and controller firmware may cause the Utility Partition to be inaccessible. In this case, you can download the diagnostic utilities for your system from the Dell Support website at "support.dell.com" to some other media and perform the system diagnostics by booting from that media.
- * Do not use the Dell Remote Access Controller (DRAC) virtual media to run "Firmware Update" on the system. This procedure breaks the virtual media connection, causing the firmware update procedure to fail.
- * USB keys formatted with NT File System (NTFS) or file allocation table (FAT)16 are not supported.
- * Any network or Windows share or CD/DVD that you use an input to the Repository must not contain any extra file or folder that is not part of the Server Update Utility (SUU) content.
- * When you select the "No Change" option for Trusted Platform Module (TPM) Activation, under Boot sequence and security tab, the TPM activation token will not be saved to the ".ini" file.
- * "Digitally sign communications" enabled Windows share on a system running on Windows cannot be accessed. To access the share, disable this feature on the Windows system.
- * While trying to connect to SMB shares, if the SBUU fails to connect, try using simple passwords which do not have special characters. Also, if the system is part of a domain, use the domain user name for authentication than using the local system users.
- * When you insert multiple USB keys into your system, Systems Build and Update Utility uses the last inserted USB key which has a repository that is applicable to the platform to which your system belongs and is compatible with the Systems Build and Update Utility repository.

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USER NOTES FOR WINDOWS OPERATING SYSTEMS

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- * During Windows installation, the system will automatically log on to finish the post-installation tasks and will then automatically log out. It is recommended that you do not perform any task until the system has automatically logged out. Installation might end incorrectly if the installation process is interrupted.

* The Server Setup program does not support the installation of Windows 2000 Datacenter.

* If you enable "Console Redirection":

- a dialog box displays that an Expanded Memory Support (EMS) connection has been discovered during the operating system installation.

- and you enter the organization name and computer name, an error message displays that "unattend.txt" is incomplete and prompts you to enter the username. Enter the username to continue with the unattended setup operation.

* It is recommended that you use Windows 2000 with Service Pack 4 (or higher) integrated CD for the Windows 2000 installation if your system has the Conexant modem. Otherwise, the installation of Windows 2000 will stop responding while devices are being installed. Reboot the system to resolve the issue.

* On Windows 2000 Advanced Server operating system, if you uninstall and then reinstall Cluster Service, you may get an incorrect prompt to insert a "Service Pack" CD. Insert the "Microsoft Windows 2000 Advanced Server" CD instead.

* In the Advanced "Enter OS Information" screen, enter all IP addresses for the "Trap Destination" field separated by commas. Do not enter trailing commas, or the installation will stop when the Windows Setup program runs.

* On PowerEdge 700 and 750 systems, a yellow bang appears against The USB controller symbol after the operating system is installed. However, USB devices will work correctly when connected.

* If you install Windows Server 2003 Web Edition using Dell Systems Build and Update Utility Internet Information Server (IIS) is installed by default. You should choose NT File System (NTFS) to ensure all of IIS components install correctly.

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USER NOTES FOR RED HAT ENTERPRISE LINUX OPERATING SYSTEMS

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* At least 14.1 GB disk space is required to install Red Hat Enterprise Linux.

* If you use the "Download RPMs from Network" feature, the RPMs are downloaded to the partition called "/home." The recommended size for this partition is 3 GB plus the size of the RPMs you want to update. All downloaded RPMs are installed during the post install phase of the Red Hat Enterprise Linux installer.

- * Entering a double quote character (") in the "Root Password" field of the Red Hat Enterprise Linux installation will result in denial of access to the root "log in."
- * Systems Build and Update Utility limits the maximum block device size on a Linux system to 8 TB.
- * A network download of RPMs requires that the target system have a DHCP IP address and that the system is connected to a network.
- * While configuring the hard drive on a system to install a Red Hat Enterprise Linux operating system, if the hard drive space on your system is used completely and the range specified in the GUI against the "swap" partition is the same (for example [1024 -1024] MB), the scroll bar remains to the left side.

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USER NOTES FOR VMware ESX

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- * You will need ESX 3.0.2 plus a hardware support patch to support following systems and devices:
 - AMD Opteron 2300 and 8300 processor families
 - Intel Xeon E5400/L5400/X5400, E5200/L5200, and E7300/L7300/X7300 processor families
 - Dell PERC 6 and SAS 6 family SAS controllers
 - SATA Optical Drives
 - Dell systems R900, 1950, 2900, and 2950

For details on the hardware support and ESX build number, see "www.dell.com/vmware" on the Dell Support website at "support.dell.com." Also, see the "Dell OpenManage Server Administrator Compatibility Guide," the "Dell Systems Software Support Matrix," and the "Dell OpenManage Deployment Toolkit User's Guide."

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KNOWN ISSUES

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The following subsections list the known issues with this release of Systems Build and Update Utility.

- * On PowerEdge 1950, 2950 and PowerVault NX 1950 systems with internal USB, BIOS setting configuration for internal USB Port is possible only if User Accessible/external (UA) USB ports are set to "All Ports On." If UA USB ports are not set to "All Ports On"

and you try to configure the BIOS setting for the internal USB port using SYSCFG, the configuration will appear to be successful but the changes will not take effect after the next reboot. If UA USB ports settings are changed from "All Ports On" to "All Ports Off" or "Only Back Ports On," the USB port will be automatically Set to "Off" during the next reboot.

KNOWN ISSUES ACROSS ALL OPERATING SYSTEMS

- * Systems Build and Updates Utility does not support RAID Configuration on any system with a SATA 2s controller connected to one hard drive. To install Systems Build and Update Utility on a system with the SATA 2S controller, set the hard drive configuration to "Native Mode" in the BIOS setup or configure RAID using the "Ctrl+A" option.
- * If a USB flash device is connected to the system, Systems Build and Update Utility may fail to install the operating system. To resolve the issue, perform one of the following actions:
 - Remove the USB flash device.
 - In the BIOS setup, under "Boot Order," move the "USB Device" selection to the end of the list.
- * The "View Hardware" feature in Systems Build and Update Utility does not provide information on devices that are connected to the chassis. The current listing of devices is not complete and does not include devices such as Fibre Channel cards and Dell Remote Access Controller 5 (DRAC 5).
- * On Power Edge 1800 systems, the "View Hardware" feature in Systems Build And Updates Utility does not show the CERC SATA 1.5/2S controller when it is set to Advanced Technology Attachment (ATA) mode. This is due to the current limitation of CERC SATA 1.5/2S; it has the same PCI device ID for both ATA and RAID mode.
- * Use of localized special characters might cause the Systems Build and Update Utility GUI to freeze intermittently.
- * If there are multiple SCSI or RAID controllers on the system, Systems Build and Update Utility will always use the controller listed first in the BIOS boot order list. If you want to use a particular controller for the operating system, you must go to the BIOS setup (F2 on boot) and set the given controller as the first boot device.
- * Systems Build and Update Utility does not support the configuration of partitions or the installation of operating systems on systems with PERC 2/SC, PERC 2/DC, or PERC 2/QC controllers or any type of Fibre Channel storage adapter.

- * It is not recommended that you start the system setup program if any virtual disks are in a failed or degraded state. Use the RAID controller's firmware utility ("`<Ctrl><a>`," "`<Ctrl><m>`," or "`<Ctrl><c>`" during boot) to reset the RAID controller's state. If an array disk is removed, the firmware utility may indicate the configuration has changed. Accepting these changes on the command line may not suffice; enter the firmware utility and reset the controller.
- * On CERC ATA or CERC SATA RAID controller cards, disks that appear in "Legacy" mode will not be available for RAID configuration in Systems Build And Updates Utility. If you wish to use any disk that is in "Legacy" mode as part of a RAID container, you need to use the RAID controller firmware utility to initialize these disks. Likewise, if all disks are in "Legacy" mode, then Systems Build And Updates Utility may fail to configure RAID on the controller.
- * The "Server Setup" program might fail if it runs when scrubbing is active on a RAID virtual disk.
- * Systems Build and Update Utility does not identify the boot device when PERC (4DC/3DC) is in cluster mode and the adapter's BIOS is disabled. This will put Systems Build and Update Utility in an infinite "Write Disk signature" and reboot loop. Use Systems Build and Update Utility to install the operating system on PERC in a non-cluster mode.
- * Systems Build and Update Utility cannot detect the correct slot number of PCI slots containing Adaptec RAID controllers. The message "Unknown Slot Number" is displayed.
- * On systems with low memory (less than 256 MB) and more than one RAID controller, Systems Build and Update Utility may fail during RAID configuration. Install the additional adapters after the operating system has been installed on the first adapter.
- * When using the Custom install script feature, commands which do not return cause the system to stop responding during booting of Red Hat Enterprise Linux or while registering components on Windows installations.
- * On SAS 5/IR controller cards, disks that appear in "Foreign" state will not be available for OS installation in non-RAID mode. If you wish to use any disk that is in "Foreign" state for OS installation, clear the physical disks using "Erase All Physical Disks" feature under System Tools section. If all disks are in "Foreign" state, Systems Build And Updates Utility may fail to install OS on the controller in non-RAID mode.
- * On a system with SAS 5iR controller cards connected to more than 2 disks, Systems Build And Updates Utility supports only "Advanced RAID Configuration." In Advanced mode, it is mandatory that you select disk with lowest drive ID for RAID configuration.

* When you use Systems Build and Update Utility with a keyboard-video-monitor (KVM) switch, the GUI may not display due to incompatibility with the Server Interface PODs (SIPs) used. To view the GUI, connect your monitor directly to your system or change the SIP.

* The "View Hardware" option in Systems Build and Update Utility lists the L2 cache size as 4 MB for 5300-series processors running on Red Hat Enterprise Linux version 4 operating system; however, the "BIOS SETUP" option lists the L2 cache size as 8 MB.

This is because Linux "reads" a 5300-series processor in terms of per-logical-CPU-thread. Hence, each logical thread (each set) would still have access to only 4 MB cache, and so it is reported as such by the "View Hardware" option.

The "BIOS SETUP" option "reads" the 5300-series processor as a two-set package, each with a 4 MB L2 cache. In each set, the two cores share the 4 MB cache. Hence, this option reports a total L2 cache size of 8 MB.

Therefore, the different L2 cache sizes

listed are due to different cache size reporting mechanisms, and not an error by the operating system.

KNOWN ISSUES FOR RED HAT ENTERPRISE LINUX OPERATING SYSTEMS

* When using the "Dell Systems Build and Update Utility" CD for new RAID configurations, installation of the Red Hat Enterprise Linux operating system may fail if both the USB CD and USB floppy are connected. To avoid the installation failure, remove the USB floppy connection before rebooting the system with the CD for the installation process.

* Installation of Red Hat Enterprise Linux (version 4) operating system is not supported on any system having the following controllers:

- CERC ATA 4-CH

NOTE: In the above case, the option to install Red Hat Enterprise Linux (version 4) is unavailable in the "Select Operating Systems" page.

* Installation of Red Hat Enterprise Linux (all versions) operating system is not supported on any system having the following controllers:

- Promise RAID
- CERC SATA 2S in RAID mode

NOTE: In the above cases, option to install Red Hat Enterprise Linux operating system will not be presented in the "Select Operating Systems" page.

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KNOWN ISSUES FOR SUSE (R) LINUX ENTERPRISE SERVER (VERSIONS 9 AND 10) OPERATING SYSTEMS

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* SUSE Linux Enterprise Server (versions 9 and/or 10) operating system may fail to install on systems equipped with multiple RAID and/or SCSI controllers, whether installed on the system board or in PCI slots. This failure may occur when using "Server Setup" or performing a manual installation. When two or more RAID or SCSI controllers are present, install SUSE Linux Enterprise Server (versions 9 and/or 10) with only one configured RAID or SCSI controller. Configure the other controllers after you install the Novell SUSE Linux Enterprise Server (versions 9 and/or 10) operating system.

* The SUSE Linux Enterprise Server (version 9) operating system installation may fail on systems equipped with multiple disks and the boot device is set to a disk that does not have the lowest port number. To ensure successful installation across all supported operating systems, it is recommended that the boot device is set to the disk with the lowest port number.

* SATA optical devices are not supported with the SUSE Linux Enterprise Server version 9 SP3 operating system. Systems Build and Update Utility can install SUSE Linux Enterprise Server version 9 SP3 using the SATA optical drive. However, if you try to use the SATA optical drive after installation, the drive will not be detected by the operating system.

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