Dell™ Backup and Recovery Manager V1.3

User's Guide

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Notes and Cautions

NOTE: A NOTE indicates important information that helps you make better use of your computer and software.

CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.

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1 Dell™ Backup and Recovery Manager V1.3 Overview

Dell™ Backup and Recovery Manager V1.3 (DBRM) is a basic and easy to use tool that helps you create and manage your file and system backups, and recover your computer and data in the event of a failure. Using the program, you will also be able to:

1. **Create bootable recovery disk** or external storage device that includes the **Windows Recovery Environment** and can include your **Dell Factory Image** (strongly recommended). Your **Dell Factory Image** includes your operating system, and any drivers and applications installed when your system was built in the Dell factory (*Microsoft Windows Vista and Windows 7 only - not available in Windows XP*).

   How does this benefit me? The **Windows Recovery Environment** allows you to automatically fix problems that are preventing Windows from starting. It also allows you to restore Windows to an earlier point in time, access a command prompt and among other things, launch **Dell Backup and Recovery Manager** and restore your system from a previously saved system backup image, all without having to be in Windows.

   NOTE: It is strongly recommended that you include your **Dell Factory Image** on your recovery disk.

2. **Create a single legal backup copy of your Microsoft Windows Operating System** (OS) and other factory-installed applications on optical media (*all OS versions*) or an external storage device (*Microsoft Windows Vista and Windows 7 only*).

   How does this benefit me? This allows you to create your one-time backup copy of your original Microsoft Windows operating system, and factory-installed applications that no longer include optical media with your system. The OS media you create also includes your Dell factory-installed drivers. The drivers reside in the **Drivers** folder on the optical media or external storage device. If you no longer have your **Dell Factory Image** or a system backup image to restore, the OS media allows you to at least get back to your original Windows operating system state and manually reinstall your Dell drivers. The applications media backups will allow you to reinstall the applications you purchased with your system. This is another great tool in your arsenal to use.

   △ **CAUTION: Reformatting your primary hard drive or deleting its Recovery partition will delete your Dell Factory Image. As a result, the image will no longer be available as a Restore option.**

   △ **CAUTION: For desktops and notebooks, it is recommended that you temporarily disable your Power Management settings to avoid potential interruption to the backup and recovery process. Interrupting the backup and recovery process can result in potential data loss.**

2 Overview Screen

The **System Backup Status** screen is the first screen displayed when you launch **Dell Backup and Recovery Manager**. You can also access it from other screens in the **Dell Backup and Recovery Manager** by clicking the **Overview** button.

The **System Backup Status** screen displays information about the last system backup image made. For Microsoft Windows Vista and Windows 7 systems that include a copy of your **Dell Factory Image** on the Recovery partition, it will be your initial system backup image shown until you back up your system.

For Windows XP systems that do not have a Recovery partition and a **Dell Factory Image**, the backup status information is replaced with a message informing you that a backup has not been made and to create a backup now by clicking **Backup System Now ...**. For more information, go to **2.2 If you have not created a system backup**.

NOTE: It is recommended that you make frequent and regular system backups as a safeguard against possible future software or hardware failures that may occur unexpectedly. For more information, go to **13 Why do I need to back up?**

NOTE: It is recommended that you backup your system before and after downloading any security updates and installing any applications.

If you have created a system backup

If you have created a system backup, the **System Backup Status** screen displays the following information about the last successful backup:

- Name of the backup, which you choose when creating a backup (for example, **Dell Factory Image**)
- Date and time the backup occurred

The screen also provides the link **Backup System Now ...**. For information about backing up the system, go to **4 Backing up your system**.

To back up specified files on a system, go to **3 File Backup and Restore**.

NOTE: For Microsoft Windows Vista and Windows 7 systems, your **Dell Factory Image** is your initial system backup.

2.1 If you have not created a system backup

If you have a Windows XP system and have not created a backup, or if your **Dell Factory Image** was removed, the **System Backup Status** screen displays the following message:

> You have not created a backup. It is recommended that you create at least one backup to use to enable your recovery in the event of catastrophic failure.

The screen also provides the link **Backup System Now ...**. For information about backing up your system, go to **4 Backing up your system**.

To back up specified files on a system, go to **3 File Backup and Restore**.

3 File Backup and Restore

The **File Backup and Restore** screen provides links that execute Microsoft® Windows data backup and recovery functions for specific file types.

You can access the **File Backup and Restore** screen from other screens in the Dell Backup and Recovery Manager by clicking the **File Backup and Restore** button.

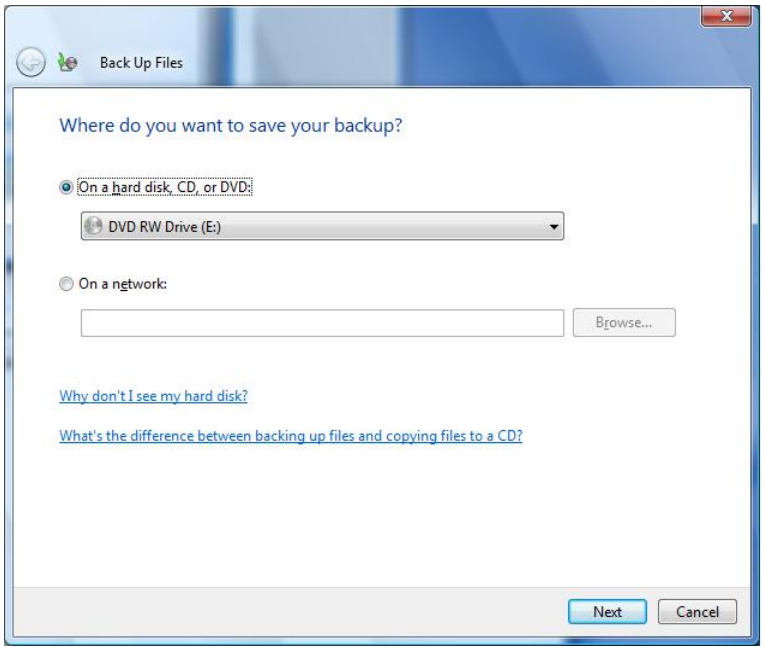
If you need additional help with the following screens, refer to Microsoft's Help system regarding backing up and restoring files.

3.1 Backing up your data files

△ **CAUTION: If you are using a notebook computer for backup or recovery, it is strongly recommended that you run the computer on AC power rather than battery power to avoid potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.**

1. Click **Backup files....**

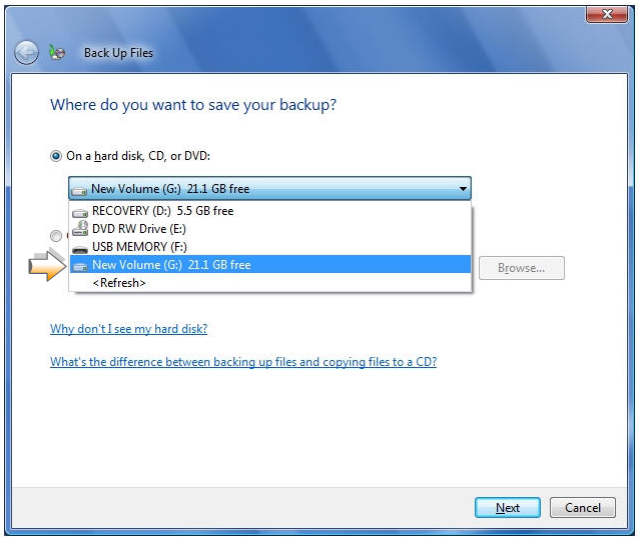
   The **Where do you want to save your backup?** screen appears.



2. Specify the location where you want to save the backup file.

   You can save the backup to a hard drive, CD, DVD, or network location.

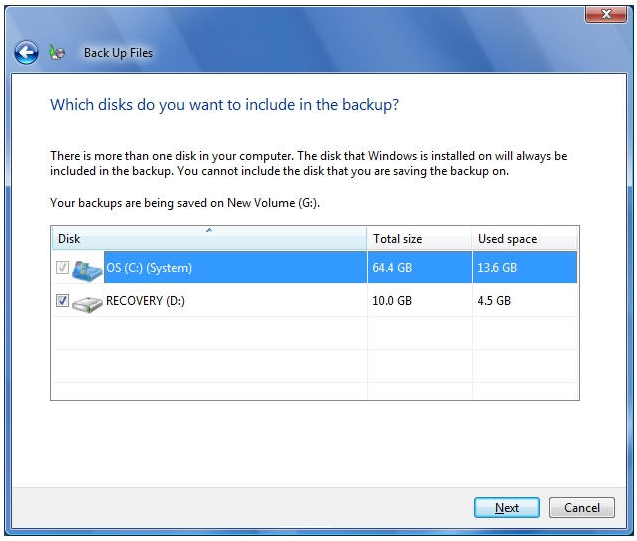
3. Click **Next**.



The **Which disks do you want to include in the backup?** screen appears, displaying a list of disks.

4. Select all of the disks you want to back up by selecting the check box beside each disk.

NOTE: The disk on which the Windows operating system is installed is always automatically included in the backup. However you cannot include the disk where the backup image will be stored.

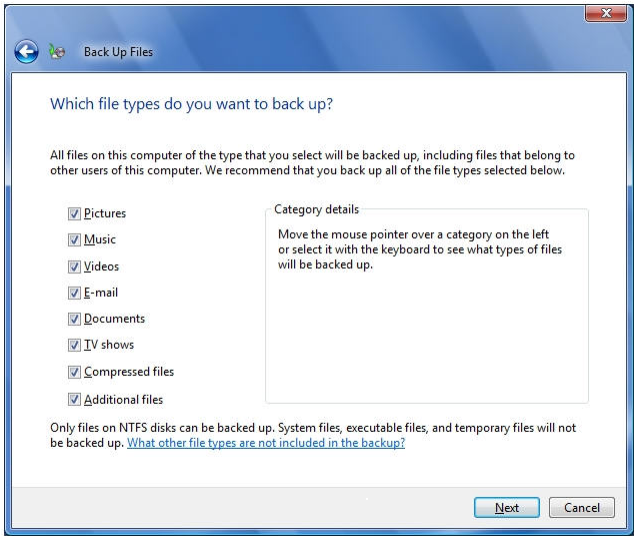


5. Click **Next**.

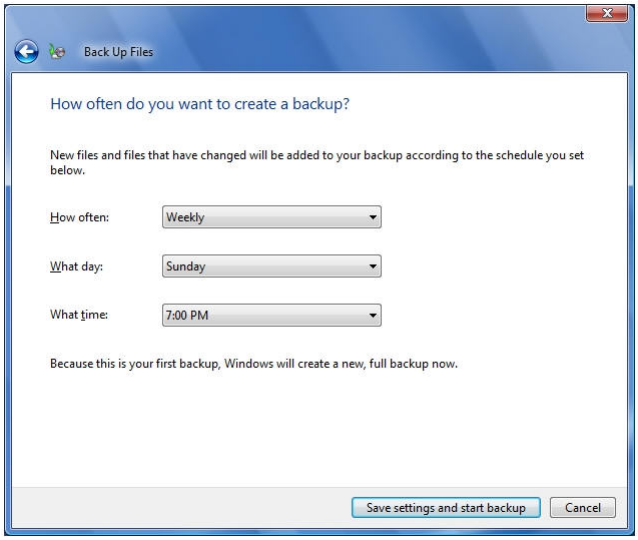
The **Which type of files do you want to back up?** screen appears, displaying a list of file types.

6. Select the check box for each file type you want to back up.

7. Click **Next**.



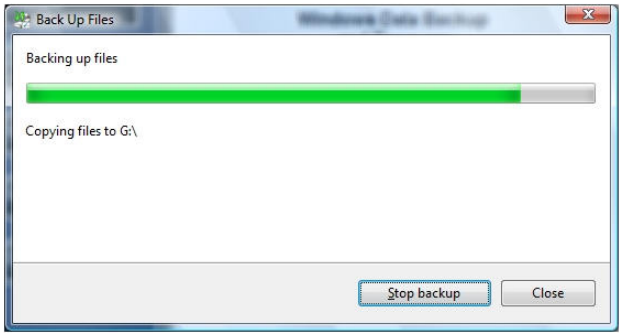
The **How often do you want to create a backup?** screen appears.



8. Using the drop-down menus, select the time increment, day of the week, and the time of day you want to run the backup.

9. Click **Save settings and start backup** to begin the backup process.

   A progress bar displays as Windows creates the backup. When the backup is complete, Windows displays a balloon message above the system tray indicating the backup was successful.



3.2 Restoring your data files

△ **CAUTION: If you are using a notebook computer for backup or recovery, it is strongly recommended that you run the computer on AC power rather than battery power to avoid potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.**

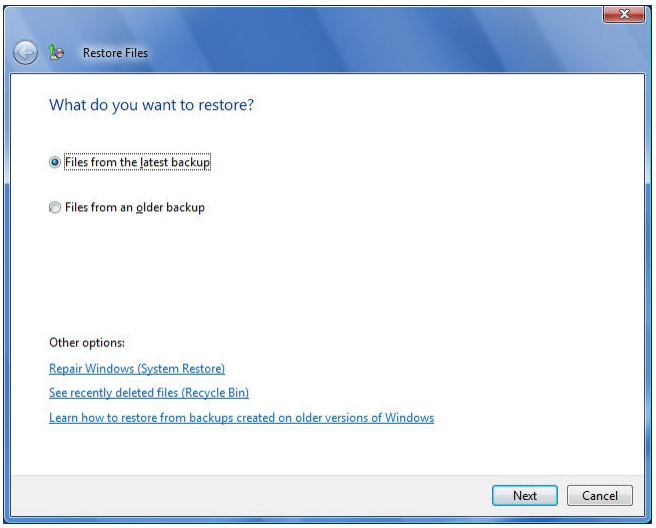
NOTE: The **Restore files...** link will be inactive if you have not previously backed up any files.

1. Click **Restore files....**

2. Select the backup from which you want to restore files: **Files from the latest backup**, or **Files from an older backup**.

3. Click **Next**.

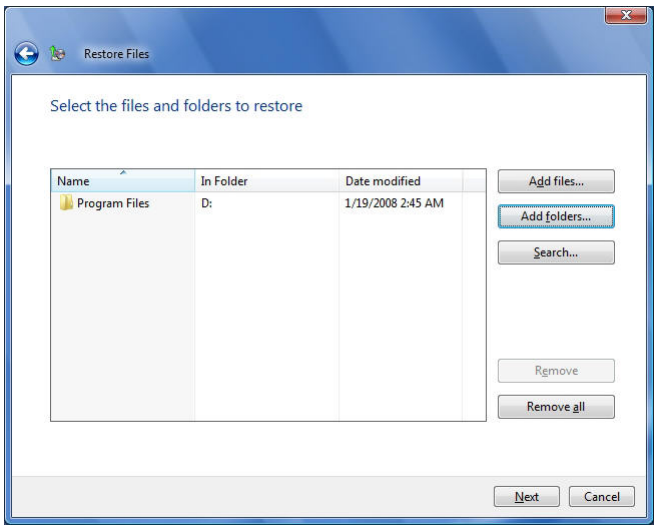
   The **Select the files and folders to restore** screen appears.



4. Select files and folders to restore:

   a. To add individual files, click the **Add files...** button, browse to the location of each file, and then select the file to add it to the list. Repeat for each file you want to restore.

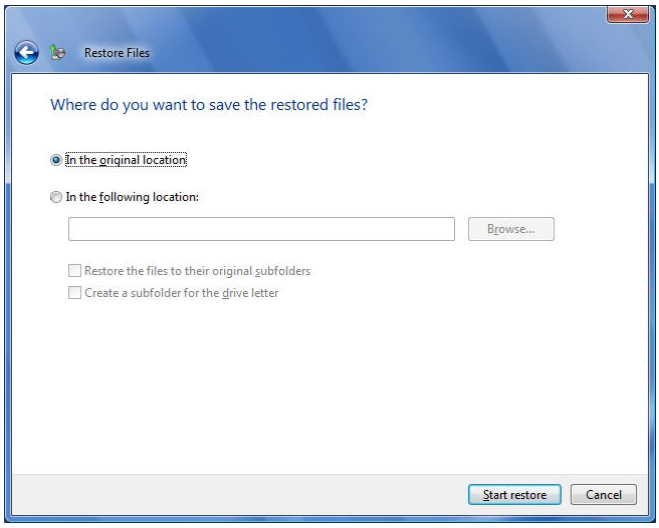
   b. To add folders and their contents, click the **Add folders...** button, browse to the location of each file, and select the file to add it to the list. Repeat for each folder you want to restore.



   c. To search rather than browse for files and folders, click **Search...**.

5. Click **Next**.

   The **Where do you want to save the restored files?** screen appears.



6. Select where you want the files restored.

7. Click **Start restore**.

8. When complete, click **Finish**.

4 Backing up your system

△ **CAUTION: If you are using a notebook computer for backup or recovery, it is strongly recommended that you run computer on AC power rather than battery power to avoid the potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.**

NOTE: To use the **Dell Backup and Recovery Manager**, you must have Administrator log-in rights or be listed in the Windows® Administrators Group.

NOTE: When you perform a system backup, only your primary partition where your operating system is stored (commonly labeled C:) will be backed up. Other content that resides on this partition will also be included in the system backup. However if you have information stored on external drives, other internal drives, or on other hard disk partitions, you must use the **File Backup and Restore** tool in the **Dell Backup and Recovery Manager** to back up this information. This tool is accessed by clicking the **File Backup and Restore** button.

NOTE: Store your optical backup media in a cool dark place and handle it with care using protective sleeves or cases. USB Flash media is not recommended for long term storage. External hard drives offer the greatest ease of use, best performance, stability, and value. However they are subject to damage from heat, physical shock, electromagnetic pulse, and files can be deleted by other users in a non-secure environment.

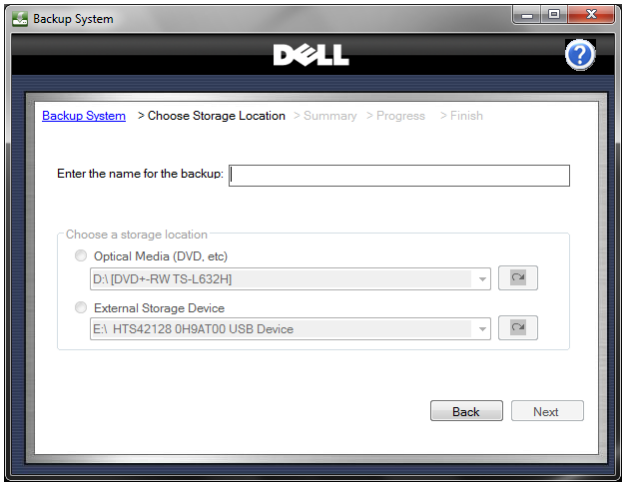
△ **CAUTION: To create a backup in Windows 7, your primary hard drive must be set as the first boot device. Please enter your BIOS System Setup and change the device boot order if necessary.**

1. Click **Backup System …** on the **Backup System** main screen.

   The **Choose Storage Location** screen appears.

2. Type a name for the backup.

3. Choose where you want to save the backup, **Optical Media** or **External Storage Device**, and then select the device from the drop-down menu.



Click **Refresh**  adjacent to the drop-down menu to clear your selection or to add a new external storage device attached after the drop-down was populated.

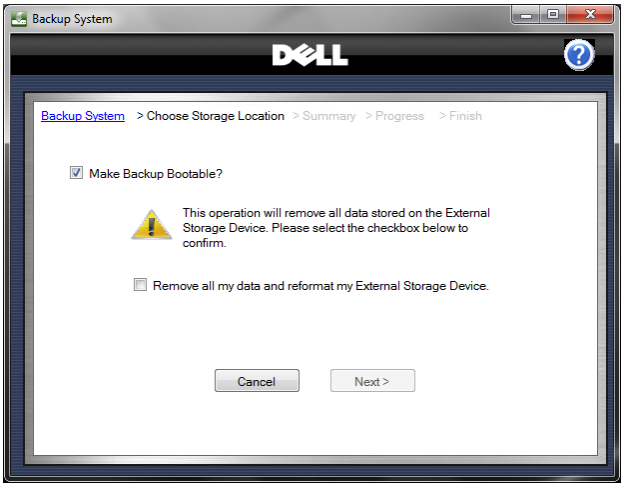
NOTE: For external storage devices, clicking **Refresh** will de-select a device from the drop-down menu and refresh the list of available devices. If the **Next** button was enabled, it will be disabled until you select a new device. If you select an optical device from the drop-down menu and a blank disk was found in the device, the **Next** button will be enabled. Otherwise you will be asked to insert blank media in the drive. Click **Refresh** after the drive spins up to enable the **Next** button.

Click **Next.**

If you select optical media or insert a small USB flash drive, the backup will automatically be bootable and you will go straight to the **Summary** screen shown in step 4. If you select a large external storage device and it is *not* already bootable, a screen with a check box labeled **Make Backup Bootable?** will appear.

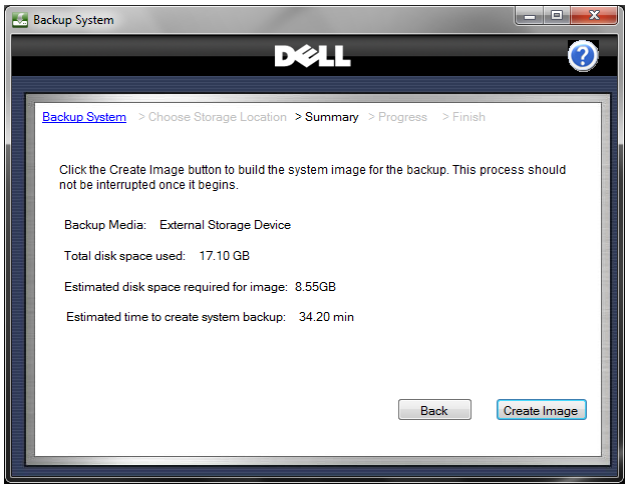
△ **CAUTION: The process of making a bootable backup will erase all content on the external storage device.**

The default state of this check box is checked. This is strongly recommended. A bootable backup is necessary to restore to a new or replacement hard drive in the event of a primary hard drive failure.



If you want to make the backup bootable, read the caution statement carefully and then check the **Remove all my data and reformat my External Storage Device** check box.

If the large external storage device contains data you do not want erased, uncheck the **Make Backup Bootable?** check box. This will enable the **Next >** button. If you proceed, your backup will be stored on the selected external storage device but it will not be bootable. To restore the backup, you will need to boot from a bootable disk such as a bootable Recovery disk.



4. Click **Next >**

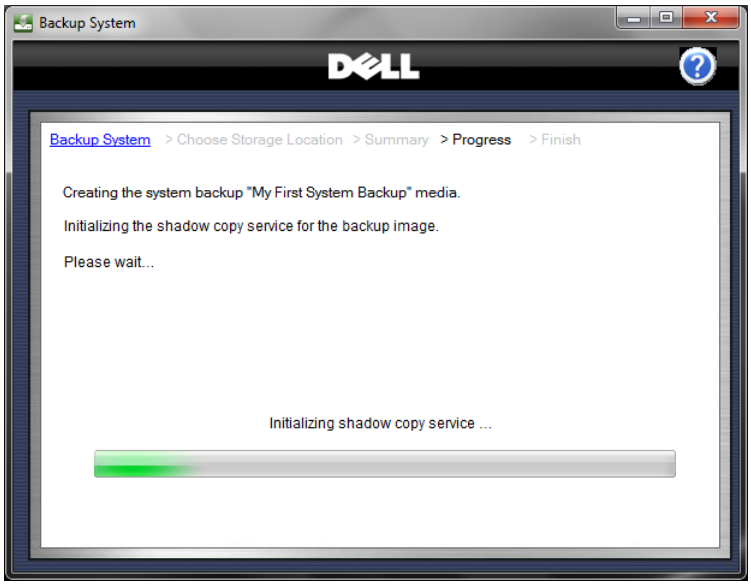
   The **Summary** screen appears.

This example is for an external storage device. The summary screen for optical media is similar but includes an estimate for the number of blank optical media required.

△ **CAUTION: The following step starts the process of creating the backup. When you start the process, your system automatically reboots into the Windows Recovery Environment to create the backup. When the process is complete, your system automatically reboots the Windows operating system, after which you may resume your normal activities. To avoid potential data loss, close any open files and applications before proceeding to the next step.**

5. Click **Create Image**.

A window appears displaying a progress bar. The progress bar will display the progress for multiple phases during the backup creation process and the name of each phase will be displayed directly above it. Some phases you may observe are **Initializing the shadow copy service …**, **Scanning files and directories …**, and **Capturing the system image …**.

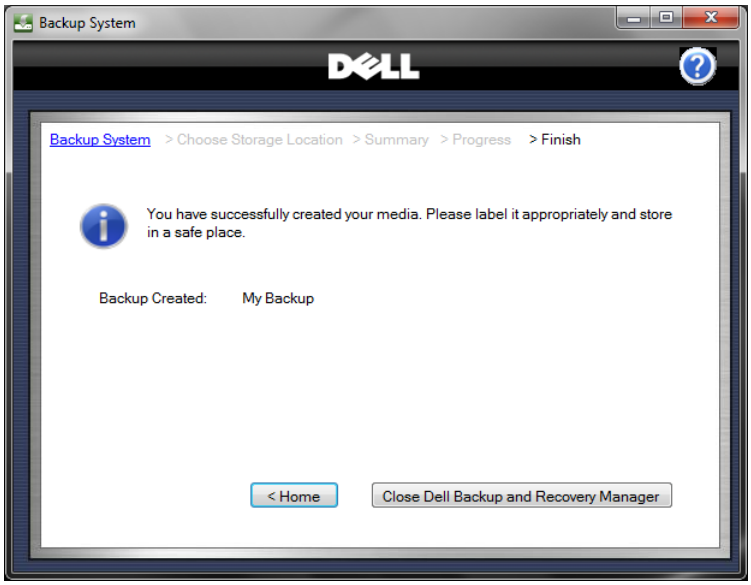


Optical media will display additional phases such as **Splitting the image file …** (if more than one optical disk is required), **Optimizing laser intensity …**, **Writing data to your media …**, **Finalizing the system image …**, and **Verifying media …**.

NOTE: The 1st Dual Layer DVD in a dual-layer set will be a created as single-layer DVD to make it bootable. However the remaining Dual Layer DVDs in the backup set will utilize their full capacity.

NOTE: Blu-ray support is limited to their use as a high capacity storage medium. Blu-ray disks will not be bootable. To restore a Blu-ray disk backup, you must boot your system from a bootable Dell Recovery disk or another bootable backup image. See **5.4 Restoring a non-bootable backup image from a bootable Recovery DVD**.

6. When the **Finish** screen appears, click **< Home** to return to the **Overview** screen or **Close Dell Backup and Recovery Manager** to exit the program.



5 Restoring your system

5.1 Restoring from within Windows

NOTE: To use **Dell Backup and Recovery Manager**, you must have Administrator log-in rights or be listed in the Windows® Administrators Group.

From the **Restore System** screen, you can restore your system using a saved backup file.

You can access the **Restore System** screen from other screens in **Dell Backup and Recovery Manager** by clicking the **Restore System** button.

CAUTION: To avoid losing the ability to create your OS Media backup, it is strongly recommended that you create your OS Media backup before your first attempt to restore from a system backup. Once you restore from a system backup, the OS Media option will no longer be available on the Dell Recovery Tools screen.

NOTE: When you perform a system restore, only your primary partition where your operating system is stored (commonly labeled C:) will be overwritten. Other partitions you may have created on the primary drive will not be overwritten or changed in any way.

NOTE: If you backed up your system using the **Backup System** tool, and your files from other drives and/or partitions using the **File Backup and Restore** tool, you will be able to restore your system to the exact state when your backups were made, even after a catastrophic hard disk failure. System backups made on an external storage device are bootable and can be used to completely restore your primary partition including your applications and data that are stored there. Once restored, use your file backup to restore your applications and data to other drives and partitions.

CAUTION: Restoring your system using a previously created backup, your system and its data will be overwritten. It is strongly recommended that you back up current data that you want to keep before proceeding with the restore process.

CAUTION: If you are using a notebook computer for backup or recovery, it is strongly recommended that you run the computer on AC power rather than battery power to avoid potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.

1. Click **Restore System**.

2. Select the backup file (also called "backup image") you want to use to restore your system from the drop-down menu.

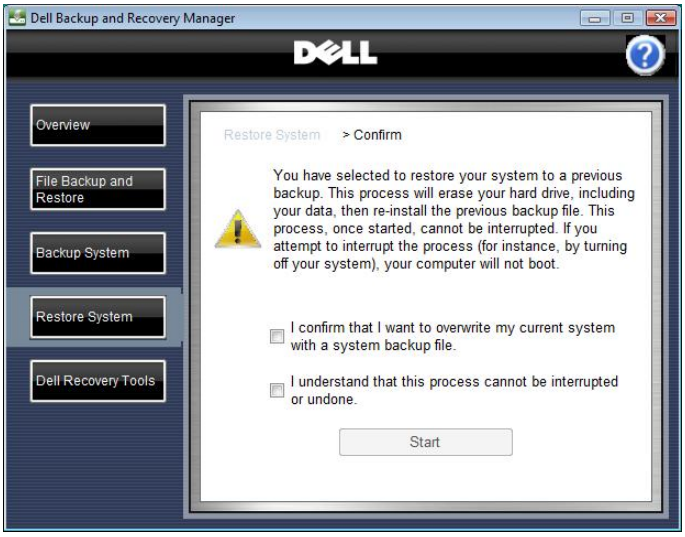
NOTE: The drop-down menu retains the names of previously created backup images even though they may not be currently available on your system. This is normal. If their names were not retained, you would not be able to restore from a backup image that resides on DVD or an external storage device that may not be presently attached to your system. By retaining their names, you will not lose your ability to restore them in the future.

3. Click **Next >**.

   The **Confirm** screen appears.

CAUTION: The following step starts the process of restoring your system. This process reboots your system into the Windows Recovery Environment, erases your hard drive, and then installs data from the selected backup file. Once you start this process, it cannot be stopped or interrupted. If you attempt to interrupt the restore process by turning off the system, the system will not reboot.

4. Read the Caution on the screen, and then check the check boxes to confirm that you want to overwrite your system with the selected backup file and that you understand that the restore process cannot be interrupted or undone.



5. Click **Start**.

   The system will reboot into the **Windows Recovery Environment**. **Dell Backup and Recovery Manager** will first erase your operating system partition and then apply the selected backup image.

During the restore process, a window displays a progress bar with the name of the phase directly above it, e.g. **Applying the backup image …**.

6. The congratulatory screen appears when the process completes.

   Click **Finish**.

   The system will reboot into Windows and the state of the system will be the state at the time the selected backup was made. For example, if you restored the **Dell Factory Image**, you will be required to go through the initial Windows setup before you can use it. If you restored from a later system backup, your system will reflect that state of the system at that time.

5.2 Restoring from a bootable backup

△ **CAUTION: It is strongly recommended that you review the NOTE and CAUTIONS in the preceding section before continuing in this section.**

1. You may boot from either optical media (DVD) or an external storage device, depending on which media you used to make your system backup.

   Insert disk #1 of your set into your optical drive *or* attach your external storage device, and boot your system. If you primary hard drive is the first boot drive in your system BIOS, press **F12** during boot to bring up the **Boot Options** screen and select either your optical disk drive (e.g. CD/DVD/CD-RW Drive) or your external storage device (e.g. USB Storage Device).

   If you selected your optical drive as the drive to boot from, you will be asked to **Press any key to boot from CD or DVD …**. If you do not press a key, your system will skip your optical drive and attempt to boot from your internal hard drive. Should this happen, immediately press **CTRL + ALT + DELETE** to reboot and during the boot, press **F12**. Select your optical drive and when the message appears, press a key to boot from your optical drive.

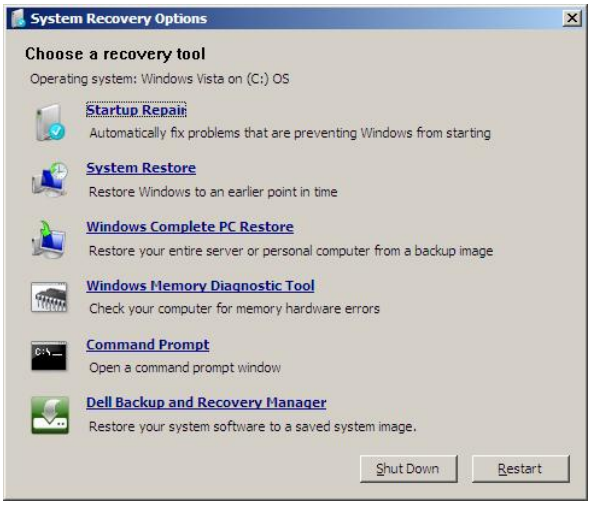
   When your system boots from the bootable backup image, you will boot into the **Windows Recovery Environment** (Microsoft Windows Vista and Windows 7 only). Since Windows XP does not have a **Windows Recovery Environment**, it will boot directly into its restore system executable and display a screen similar to the one shown in step 5 below.

2. Within the **Windows Recovery Environment**, a screen appears listing the operating system language and keyboard layout. These should be your defaults. Click **Next**.

3. The tool begins searching your system for the Windows installation to repair. When the search completes, it typically highlights your operating system on your internal hard drive. For restore purposes, this is not relevant. Click **Next**.

4. The **Choose a recovery tool** screen appears listing all the available tools you can use to recover your system. These options are provided to allow you to troubleshoot and repair your operating system on your primary hard drive.

   To restore your system from a system backup created using **Dell Backup and Recovery Manager**, click **Dell Backup and Recovery Manager** at the bottom of the menu.



5. The **Dell Backup and Recovery Manager Restore System** screen appears with a drop-down menu listing the backups currently available on your system. Select the backup you want to restore and click **Next >**.

   If you do not see the backup you want to restore, verify that you have the correct external storage device attached or the correct optical media inserted in the drive.

6. Another **Restore System** screen appears with a Warning message. Read the message carefully and then click the check box to confirm you want to restore and click **Next >** to begin the restoration process.

   If you are restoring from a set of optical media, you will be asked at some point to insert disk #2 and so on in sequence until the restoration is complete.

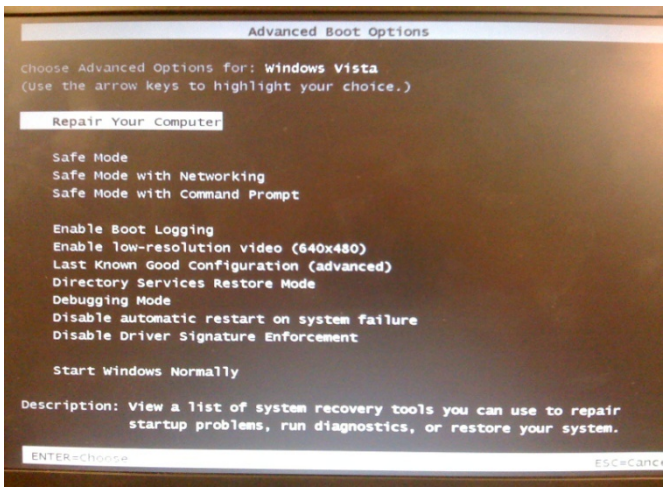
7. When the restoration process completes, a congratulatory screen appears.

   Click **Finish**.

   The system will reboot into Windows and the state of the system will be the state at the time the selected backup was created. For example, if you restored the **Dell Factory Image**, you will be required to go through the initial Windows setup before you can use it. If you restored from a later system backup, your system will reflect the state of the system at that time.

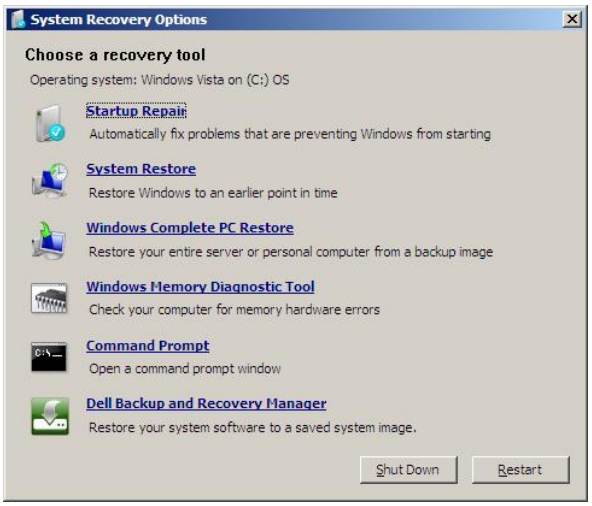
5.3 Restoring your system from the Windows Recovery Environment

1. In Microsoft Windows Vista or Windows 7, initiate a reboot of your system and press **F8** during the boot to bring up the **Advanced Boot Options** screen.



2. The first highlighted menu item is **Repair Your Computer**. Press **Enter** to select it. This launches the **Windows Recovery Environment**.

3. At the first **System Recovery Options** screen, click **Next** to select the default keyboard choice shown.



4. A log-on screen may appear. After you log on, the **System Recovery Options**, **Choose a recovery tool** screen appears.

   Click the **Dell Backup and Recovery Manager** link at the bottom of the screen.

5. From here, the steps to restore a system image are identical to those in the preceding section beginning at step 5. Refer to steps 5 through 7 the preceding section to restore your system.

5.4 Restoring a non-bootable backup image from a bootable Recovery Disk

NOTE: Blu-ray support is limited to their use as a high capacity storage medium. Blu-ray disks will not be bootable. To restore a Blu-ray disk backup, you must boot your system from a bootable recovery disk or another bootable backup image.

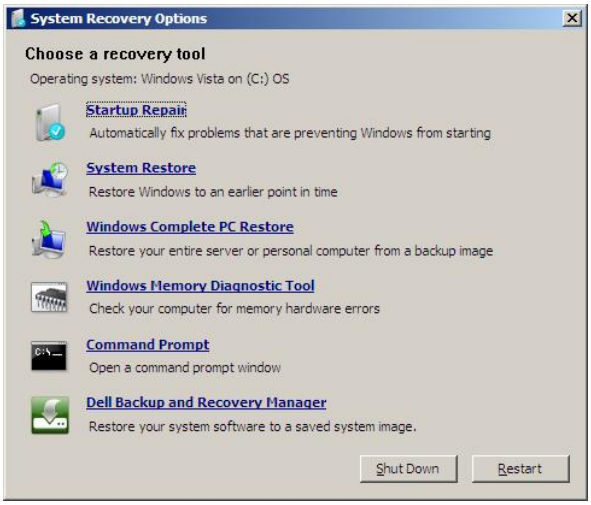
1. Insert your bootable recovery disk into your optical drive and boot your system. If the optical drive is not the first drive in the boot order, press **F12** during boot to bring up the **Boot Options** screen and select your optical drive.

   If you selected your optical drive as the drive to boot from, you will be asked to **Press any key to boot from CD or DVD ...**. If you do not press a key, your system will skip your optical drive and attempt to boot from your internal hard drive. Should this happen, immediately press **CTRL + ALT + DELETE** to reboot and during the boot, press **F12**. Select your optical drive and when the message appears, press a key to boot from your optical drive.

   When your system boots from the bootable recovery disk or an external storage device, you will boot into the **Windows Recovery Environment** (Microsoft Windows Vista and Windows 7 only). Since Windows XP does not have a **Windows Recovery Environment**, it will boot directly into its restore system executable and display a screen similar to the one shown in step 3 below.

2. The **Choose a recovery tool** screen appears listing all the available tools you can use to recover your system. These options are provided to allow you to troubleshoot and repair your operating system on your primary hard drive.

   To restore your system from a system backup created using **Dell Backup and Recovery Manager**, click **Dell Backup and Recovery Manager** at the bottom of the menu.



3. The **Dell Backup and Recovery Manager Restore System** screen appears with a drop-down menu listing the backups currently available on your system. Select the backup you want to restore and click **Next >**.

   If you do not see the backup you want to restore, verify that you have the correct external storage device attached or the correct optical media inserted in the drive.

4. Another **Restore System** screen appears with a Warning message. Read the message carefully and then click the check box to confirm you want to restore and click **Next >** to begin the restoration process.

   If you are restoring from a set of optical media, you will be asked at some point to insert disk #2 and so on in sequence until the restoration is complete.

5. When the restoration process completes, a congratulatory screen appears.

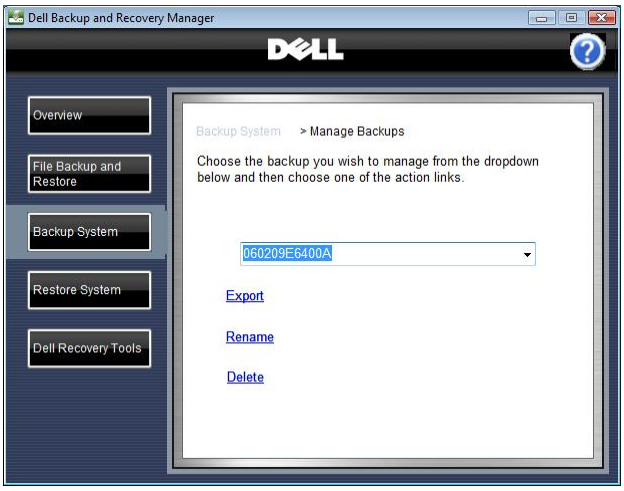
   Click **Finish**.

   The system will reboot into Windows and the state of the system will be the state at the time the selected backup was created. For example, if you restored the **Dell Factory Image**, you will be required to go through the initial Windows setup before you can use it. If you restored from a later system backup, your system will reflect that state of the system at that time.

6 Managing your system backups

6.1 Exporting a system backup

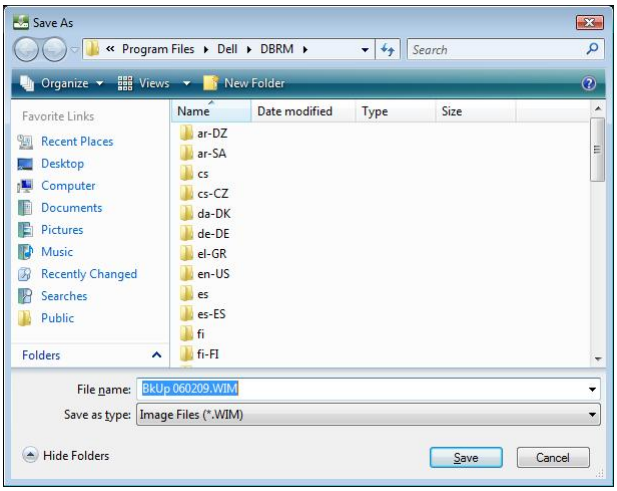
1. From the **Backup System** screen, click **Manage backups …**.



2. Select the backup you want to export from the drop-down menu, and then click **Export**.

NOTE: You cannot export an image to optical media that is larger than the capacity of a single disk. Nor can you export an image from optical media that spans more than one disk.

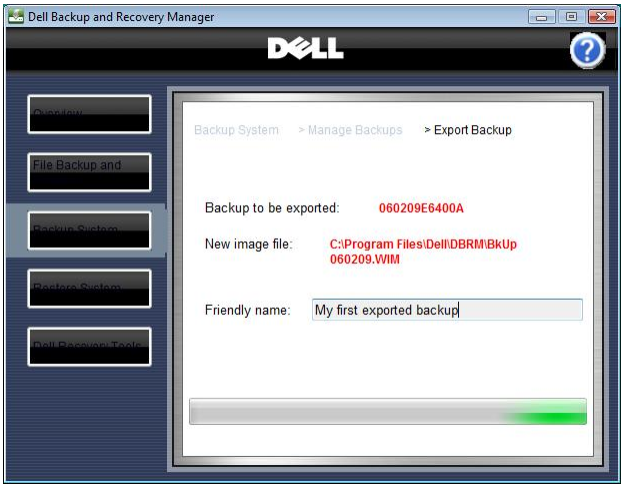
A Windows **Save As** dialog box appears. Select the location where you want to save the exported image if other than the default DBRM folder.



3. Type a new file name or select an existing file to export, and then click **Save**.

   - *If you typed a new file name*, the **Export Backup** screen appears. Proceed to step 4.
   - *If you selected an existing file*, the **Append to File Confirm** dialog box appears. Click **Add** to append the exported file to the existing file.

     The **Export Backup** screen appears.



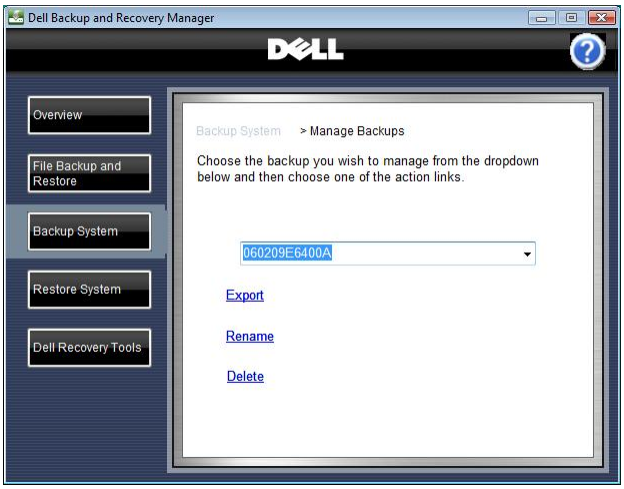
4. Type a **Friendly name** and then click **Save**.

A Friendly name is just an alternate name you can give an image when you export it. You should make it descriptive for easy identification.
A progress bar appears at the bottom of the **Export Backup** screen. When this function completes, the **Manage Backups** screen appears.

6.2 Deleting a system backup

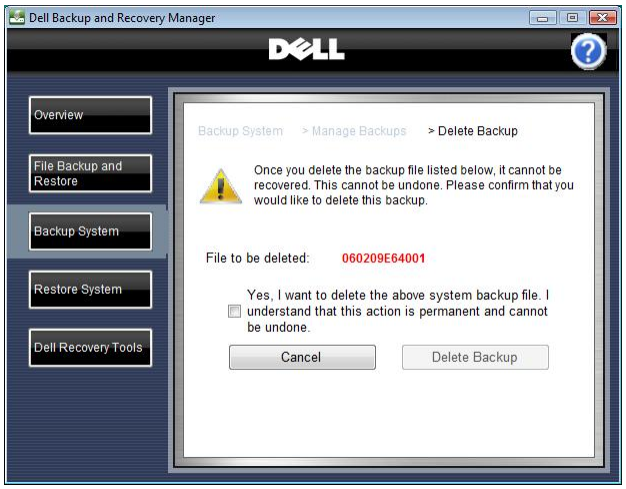
1. From the **Backup System** screen, click **Manage backups ….**

2. Select the backup you want to delete from the drop-down menu, and then click **Delete**.



The **Delete Backup** screen appears, displaying in red the name of the file you want to delete.

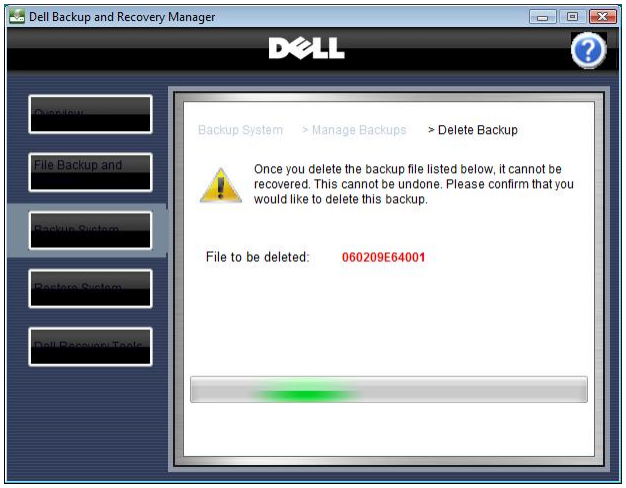
3. To confirm deletion, select the check box by **Yes, I want to delete the above system backup. I understand this action is permanent and cannot be undone**.



△ **CAUTION: Backup deletion cannot be undone. Before proceeding to the next step, ensure that you have selected the correct backup for deletion.**

4. Click **Delete Backup**.

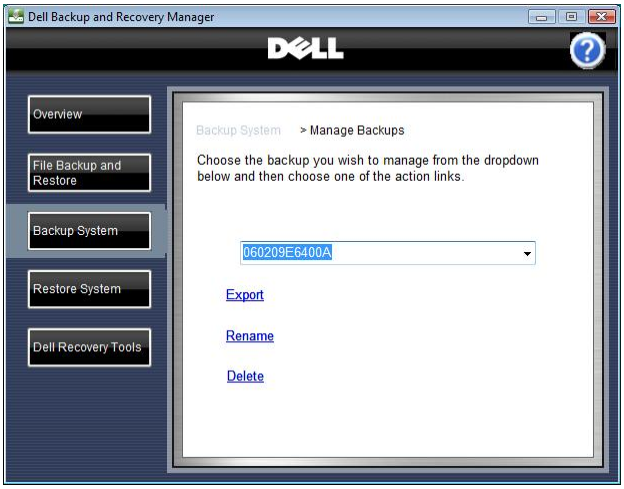
A progress bar appears at the bottom of the **Delete Backup** screen. When this function completes, the **Manage Backups** screen appears.



6.3 Renaming a system backup

1. From the **Backup System** screen, click **Manage backups ...**.

2. Select the backup you want to rename from the drop-down menu, and then click **Rename**.

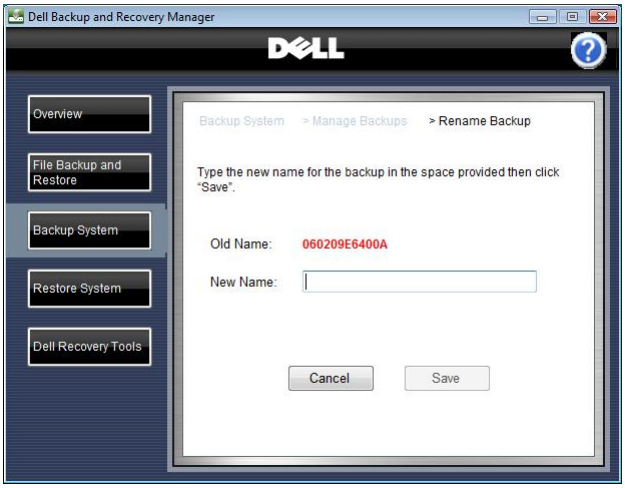


The **Rename Backup** screen appears, displaying in red the name of the file you want to rename.

3. Type a new name for the backup.

4. Click **Save**.

When this function completes, the **Manage Backups** screen appears.



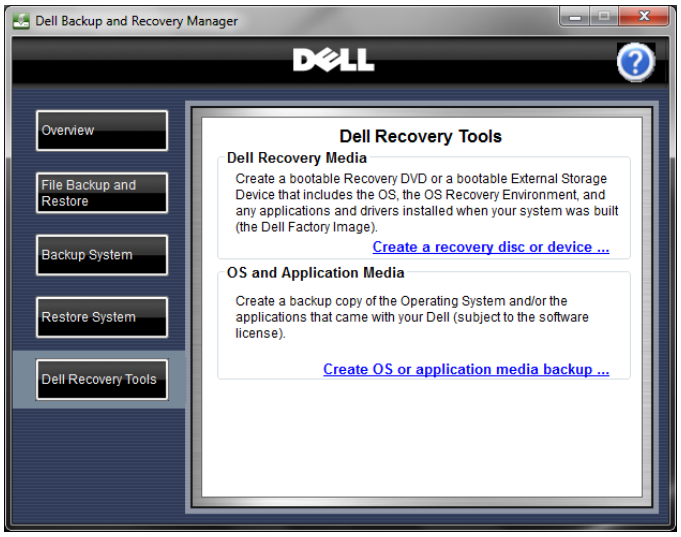
NOTE: Your original **Dell Factory Image** stored on the Recovery partition cannot be renamed. If you select it, the Rename link will not be active. However you can rename any **Dell Factory Image** copy on your Recovery DVD or external storage device.

7 Dell Recovery Tools

NOTE: To use the **Dell Backup and Recovery Manager**, you must have Administrator log-in rights or be listed in the Windows® Administrators Group.

The **Dell Recovery Tools** provides the following recovery tools for creating bootable media:

- **Dell Recovery Media (Microsoft Windows Vista and Windows 7 only)**: Use this tool to create a bootable recovery disk or external storage device that includes the **Windows Recovery Environment**, and can include your Dell factory-installed image. The recovery disk is used to restore a backup, including your **Dell factory image** (if included), or repair your operating system. For information on recovering in Windows XP, see **8 Windows Recovery Environment**.



NOTE: Dell Recovery Media does not contain any drivers, applications, files or folders, or settings you have added since receiving your system from the Dell factory.

- **OS and Application Media:** Use this tool to create a backup copy of your operating system and/or application media that came with your Dell system subject to your end-user license agreement. Your operating system media disk will also include your Dell factory-installed drivers in a separate folder on the disk. The drivers must be manually installed.

You can access the **Dell Recovery Tools** screen from other screens in the **Dell Backup and Recovery Manager** by clicking the **Dell Recovery Tools** button.

7.1 Dell Recovery Media (Not available in Windows XP)

CAUTION: If you are using a notebook computer for backup or recovery, it is strongly recommended that you run the computer on AC power rather than battery power to avoid potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.

1. Click **Create a recovery disk or device...**.

   The **Choose Storage Location** screen appears.

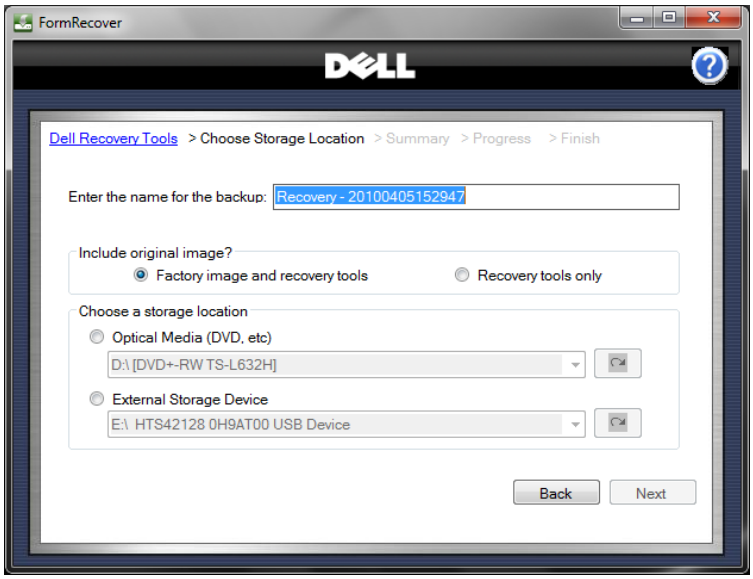
2. A default name for the recovery media is suggested. You may use it (recommended) or type another name.

NOTE: The default program-generated name for the recovery media is **Recovery – xxxxxxxxxxxxx** where "xxxx …" is the recovery media creation date and time code. In the screen below, 2010 is the year, 04, is the month, 05 is the day, 15 is the hour based on the 24 hour clock, 29 is the minutes past the hour, 47 is the number of seconds.

3. Select whether you want to include the factory image (recommended).

4. Choose where you want to save the recovery media, **Optical Media** or **External Storage Device,** and then select the device from the drop-down menu.

   Click **Refresh**  adjacent to the drop-down menu to clear your selection or to add a new external storage device attached after the drop-down was populated.

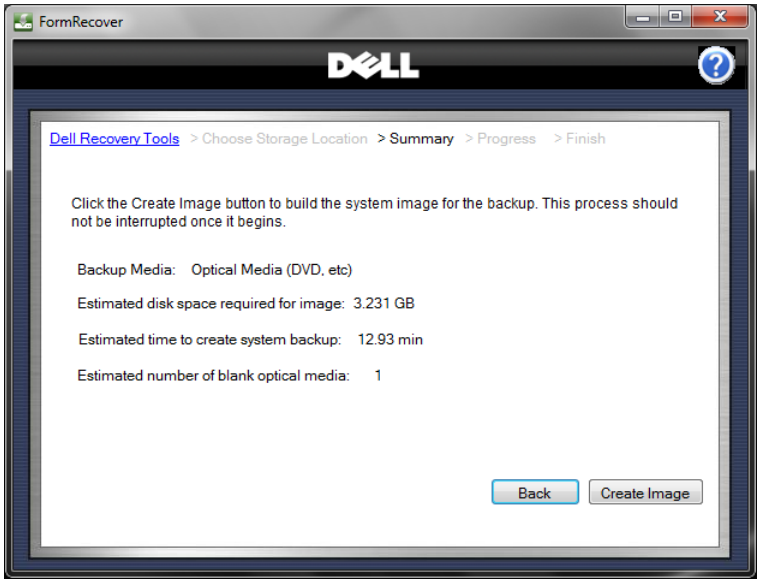


NOTE: For external storage devices, clicking **Refresh** will de-select a device from the drop-down menu and refresh the list of available devices. If the **Next** button was enabled, it will be disabled until you select a new device. If you select an optical device from the drop-down menu and a blank disk was found in the device, the **Next** button will be enabled. Otherwise you will be asked to insert blank media in the drive. Click **Refresh** after the drive spins up to enable the **Next** button.

4. Click **Next.**

The **Summary** screen appears.

NOTE: If the selected external storage device is has insufficient total space, insufficient free space, or doesn't have the required NTFS format, a message will display indicating the problem.



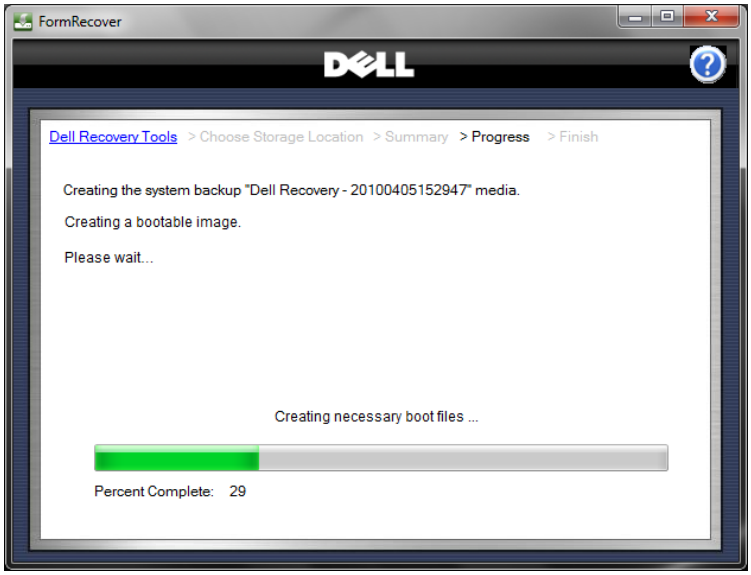
If the chosen external storage device has insufficient total space, you must select another device.

If the chosen external storage device has insufficient free space, you may select another device or choose to reformat the current device. Reformatting the device erases all existing data on the device.

If the device does not have the required NTFS format, you may select another device or choose to reformat the device in the required NFTS format. Reformatting the device erases all existing data on the device.

5. Click **Create Image** to create the Recovery media

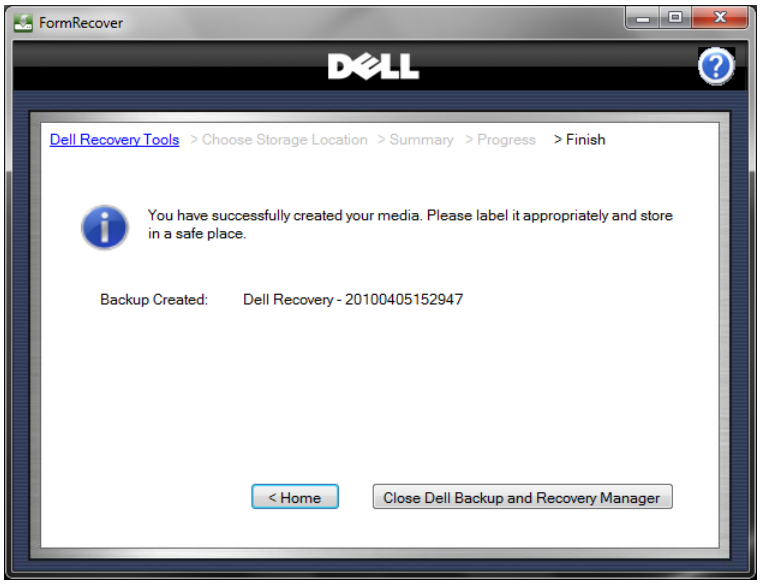
A window appears displaying a progress bar. The progress bar will display the progress for multiple phases during the backup creation process and the name of each phase will be displayed directly it. Some phases you may observe are **Creating necessary boot files …**, **Getting the Factory Image …**, **Optimizing laser**



intensity … (optical media), **Writing data to your media …**, **Finalizing the system image …** (optical media), and **Verifying media …** (optical media).

NOTE: The 1st Dual Layer DVD in a dual-layer set will be a created as single-layer DVD to make it bootable. However the remaining Dual Layer DVDs in the backup set will utilize their full capacity.

When the process completes, the **Finish** screen appears.



6. Click **< Home** to return to the main Overview screen or click **Close Dell Backup and Recovery Manager** to exit the program.
7. Label your media and store it in a safe place.

7.2 OS and Application Media (Available only if installed on your system)

CAUTION: In accordance with your software's End User Licensing Agreement, you can make only one legal backup copy of the operating system and application media. When you create the backup copy of the operating system following the steps below, your operating system will no longer appear in the software selection screen. However applications will continue to be listed in the screen so they can be repaired or reinstalled by clicking the Repair/Reinstall button. However once an application's media backup has been created, the Create Media button will be permanently disabled for that application.

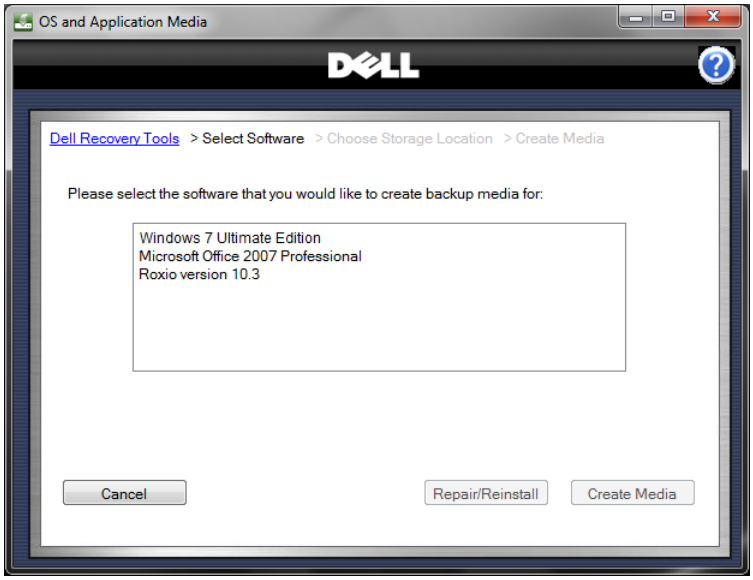
CAUTION: To avoid losing the ability to create an OS Media backup, it is strongly recommended that you create your OS Media backup before your first attempt to restore from a system backup. Once you restore from a system backup including your Dell Factory Image, the OS Media option will no longer be available.

△ **CAUTION: If you are using a notebook computer for this operation, it is strongly recommended that you run the computer on AC power rather than battery power to avoid potential interruption to the backup and recovery process. Interrupting a backup and recovery process can result in potential data loss.**

△ **CAUTION: Do not abort or interrupt the operating system media creation process once it has begun or you may lose the ability to create it.**

1. Click **Create OS and application media backup ...**.

   The **Select Software** screen appears.



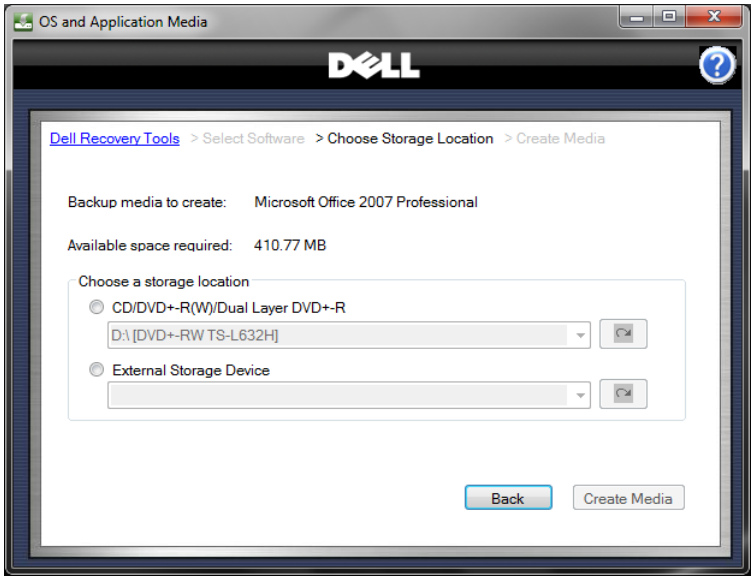
2. Select the OS or other software you that want to create media for, and then click **Create Media**.

   The **Choose Storage Location** screen appears

☑ **NOTE:** If the software was previously installed, the **Repair/Reinstall** button will be enabled. This will allow you to repair or reinstall the application if necessary. However if you have already created its media, the **Create Media** button will be permanently disabled for that application.

3. Choose where you want to save the application media, **Optical Media** or **External Storage Device**, and then select the device from the drop-down menu.

   Click **Refresh**  adjacent to the drop-down menu to clear your selection or to add a new external storage device attached after the drop-down was populated.



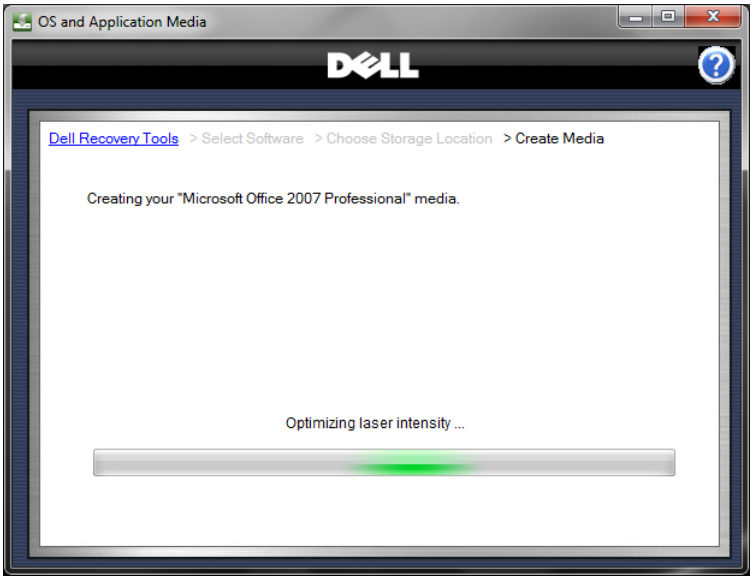
☑ **NOTE:** For external storage devices, clicking **Refresh** will de-select a device from the drop-down menu and refresh the list of available

devices. If the **Next** button was enabled, it will be disabled until you select a new device.

If you select an optical device from the drop-down menu and a blank disk was found in the device, the **Next** button will be enabled. Otherwise you will be asked to insert blank media in the drive. Click **Refresh** after the drive spins up to enable the **Next** button.

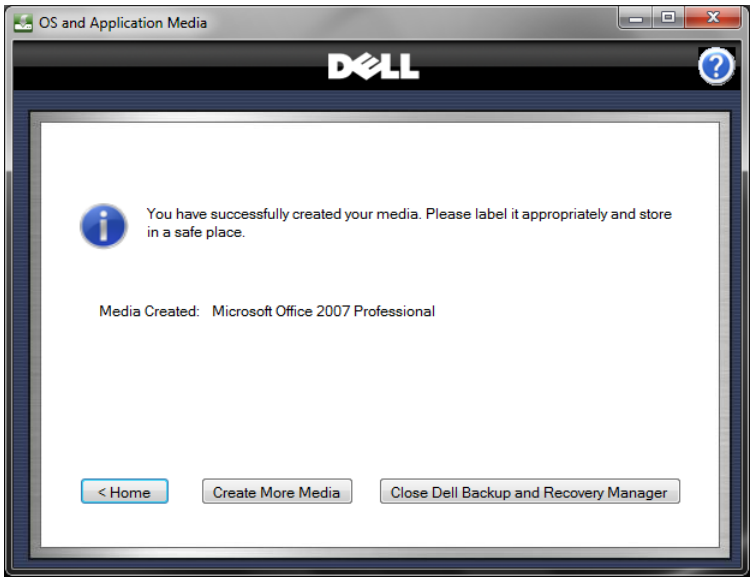
NOTE: Windows XP is only able to create OS and application media on DVD. Only Microsoft Windows Vista and Windows 7 are able create OS and application media on an external storage device.

3. Click **Create Media.**



A window appears displaying a progress bar. The progress bar will display the progress for multiple phases during the backup creation process and the name of each phase will be displayed directly it. Some phases you may observe are **Creating necessary boot files …**, **Getting the Factory Image …**, **Optimizing laser intensity …** (optical media), **Writing data to your media …**, **Finalizing the system image …** (optical media), and **Verifying media …** (optical media).

When the process completes, the **Finish** screen appears.

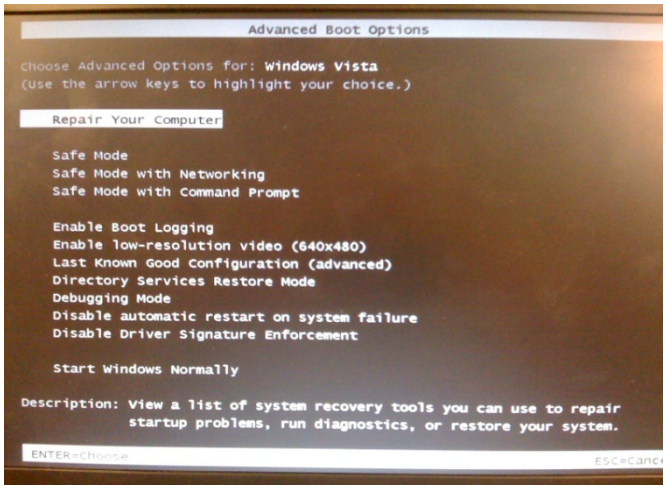


4. Click **< Home** to return to the main Overview screen or click **Close Dell Backup and Recovery Manager** to exit the program.

5. Label your media and store it in a safe place

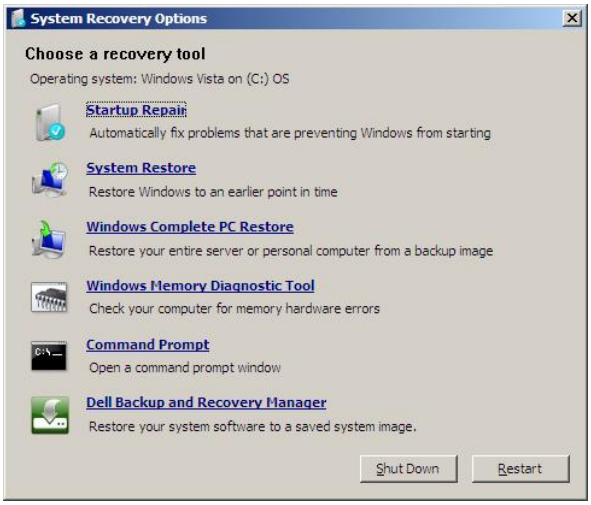
NOTE: The operating system media you created is the backup copy of your original licensed Microsoft operating system. It will not automatically install your Dell system drivers. Your Dell system drivers are located in a separate **Drivers** folder on your OS media. The drivers must be installed manually following the instructions for your particular version of Windows.

8 Windows Recovery Environment



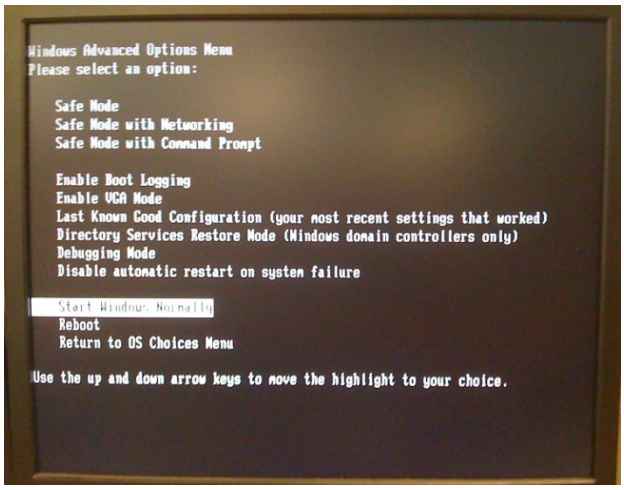
Microsoft Windows Vista and Windows 7 operating systems include a Recovery Environment to assist users in troubleshooting their system. A user can access the **Windows Recovery Environment** by pressing function key **F8** during boot. **F8** will display the **Advanced Boot Options** screen. This is a different screen than the **Boot Options** screen where you select the desired boot device after pressing **F12**.

The **Advanced Boot Options** screen displays a list of available troubleshooting options. The first item listed is **Repair Your Computer**. When you select **Repair Your Computer**, you will enter the **Windows Recovery Environment**.



After logging on, the **System Recovery Options** screen displays the various recovery tools available.

Listed at the bottom is **Dell Backup and Recovery Manager**. This tool allows you to restore your system using one of your saved backup images created using **Dell Backup and Recovery Manager**.



Windows XP Professional does *not* have a Windows Recovery Environment. However it does have a **Windows Advanced Options Menu** screen. To access the **Windows Advanced Options Menu**, press **F8** during boot. This directs you to the **Windows Boot Manager** screen. From here, press the **Enter** key and repeatedly press **F8** again to get to the **Windows Advanced Options Menu** screen.

This menu is very similar to the Windows Vista or Windows 7 **Advanced Boot Options** screen. However you do *not* have the **Repair Your Computer** link in Windows XP.

Although Windows XP does not have a **Windows Recovery Environment**, you may still restore your Windows XP system using the following steps:

1. Restore from a bootable system backup created using **Dell Backup and Recovery Manager** (this restores only your operating system partition, including **Dell Backup and Recovery Manager** and your files that you stored on that partition. Skip step 2 but you will need to perform step 3.

2. Reinstall your Microsoft Windows operating system from the OS media you created using **Dell Backup and Recovery Manager** or the OS media that may have been provided in your system box (either of these will re-install your original Microsoft Windows operating system).

3. Manually install your Dell factory-installed drivers. The drivers are located in the **Drivers** folder on your OS media. If you received an RCD or RDVD with your system, you should also find your drivers there. (This step installs your Dell drivers.)

4. Reinstall your applications from your application media backups.

5. Reinstall your files and folders from a recent backup using the **File restore…** function in **Dell Backup and Recovery Manager** (this restores your files and folders, i.e. you data from other partitions or drives). For more information about restoring your data files, go to **3.2 Restoring your data files**.

NOTE: The same steps above work equally well for Microsoft Windows Vista and Windows 7 operating systems.

9 Operating Systems Supported

- Windows® 7 Ultimate 32-bit/64-bit
- Windows 7 Professional 32-bit/64-bit
- Windows 7 Home Premium 32-bit/64-bit
- Windows 7 Home Basic 32-bit/64-bit
- Windows 7 Starter 32-bit
- Microsoft® Windows Vista® Ultimate 32-bit/64-bit with SP1/SP2 (Service Packs 1 or 2)
- Windows Vista Business 32-bit/64-bit with SP1/SP2
- Windows Vista Home Premium 32-bit/64-bit with SP1/SP2
- Windows Vista Home Basic 32-bit with SP1/SP2
- Windows XP Professional 32-bit with SP3 (Service Pack 3) (no 64-bit support)

10 Supported Optical Media

- Single Layer and Dual Layer optical DVD±R media for system backups, and recovery, operating system, and application media (no Dual Layer media support in Windows XP)

NOTE: The 1st dual-layer DVD in a dual-layer backup set will be a created as single-layer DVD in order to be bootable. However the remaining dual-layer DVDs in the backup set will utilize their full capacity.

- Added support for Blu-ray optical media (no Blu-ray media support in Windows XP)

NOTE: Blu-ray support is limited to their use as a high capacity storage medium. Blu-ray disks will not be bootable. To restore a Blu-ray disk backup, you must boot your system from a bootable recovery disk or another bootable backup image. Do not use for your OS or recovery media.

NOTE: XP does not support Dual Layer DVDs or Blu-ray media. However Microsoft does have a QFE that will enable support in XP. Customers that need support for this media may download KB952011 and install it at their own risk. Dell is unable to provide support for this Microsoft QFE.

11 Other information you need to know

1. When using **Dell Recovery Tools** to create a recovery disk, the close window icon (red button with white ×) in the upper right corner is disabled. This is intentional to prevent a user from inadvertently closing the window while performing a task and avoids potential data corruption. To exit, click the **Cancel** button.

2. The date and time stamp on the backup.WIM file differs from the actual time the backup was made. This occurs because the backup file is actually created in the Windows Recovery Environment, which does not use the same time zone information as the Windows user environment. This is normal behavior.

3. When restoring to a blank hard drive, there will be no factory utility partition on it from which to run the Diagnostic utilities.

4. When making a bootable backup from Microsoft Windows Vista or Windows 7 to an external storage device and the BIOS boot order is changed to boot from the external storage device first, the system will boot into the **Windows Recovery Environment** (WinRE). To avoid booting into this environment, either unplug the external storage device after the backup completes before the next boot, or change the boot order in BIOS so the external storage device is not the first boot drive.

5. When making a bootable backup from Windows XP to an external storage device, and the BIOS boot order is changed to boot from the external storage device first, the .ini file on the drive will automatically initiate the process of creating the bootable backup. To avoid repeated attempts to make the backup, either unplug the external storage device after the backup completes before the next boot, or change the boot order in BIOS so the external storage device is not the first boot drive.

6. A bootable backup image is required to restore to a blank hard drive.

7. Upon restoring an image to a blank hard drive, at first boot the user will receive notification that the system needs to be restarted to make the changes they performed. This is normal and caused by the fact that the system volume information is included in the backup image. When restored to a blank HDD, the system volume information is no longer correct so a system restart is necessary. This restart will reset the System Volume Information. The system volume information is included in the backup images in order to maintain the system's restore points.

8. Although external FireWire (1394) drives are supported, the BIOS in Dell systems will not boot to FireWire drives. Use DVD, or an external USB or eSATA drive to make a bootable system backup image.

9. External eSATA drives should not be used for OS media. The operating system image cannot be installed from the eSATA drive to the primary internal drive due to the way the eSATA drive enumerates at boot. Use DVD or an external USB drive for your OS media backup.

10. A Windows XP system with **Dell Backup and Recovery Manager** installed will not have the **Windows Recovery Environment** containing your **Dell Factory Image**, or the **Dell Recovery Media** option on the **Dell Recovery Tools** screen. Go to **8 Windows Recovery Environment** for the restore options available for a Windows XP system.

11. When you restore a backup image from within Windows, you may notice that the names of previous backups are retained in the drop-down menu of backups available to restore. While this may seem strange at first, this is normal behavior. If you created backups previously on other media such as DVD or an external USB drive and we did not retain the names in the database for you, you would not be able to restore them. By retaining the names, you still have the option to restore them should you ever need to do so.

    The behavior is different when you boot from a DVD or an external storage device. The only backup images available will be those currently on the devices attached to your system.

12. Microsoft Windows XP does not support Dual Layer DVDs or Blu-ray media. However Microsoft does have a QFE that will enable support in XP. Customers may download KB952011 and install it at their own risk. Since Dell does not distribute this QFE, Dell is unable to support it.

13. DBRM can work with Credant Mobile Guardian encryption but there are limitations.
    a. You are able to create a bootable system backup image and you will be able to successfully restore the backup image. However after the Restore completes, the drive will no longer be encrypted. It must be re-encrypted by performing these two steps:
        1. Launch CMGShieldUI.exe in the CMG program directory. This will turn on the encryption display window that is just a visual indicator that encryption is taking place (after encryption is initiated in the following step).
        2. Launch WSProbe.exe in the CMG program directory. This actually performs the re-encryption of all the files after the restore.
    b. You will not be able to restore a system backup using the main DBRM program from within Windows. Nor will you be able to restore a backup from within the Windows Recovery Environment (WinRE). To restore a system backup image, you must:
        1. Have previously created a bootable system backup
        2. Boot from that backup
        3. Restore the desired system backup image
        4. Re-encrypt the drive using the steps above.

12 Major differences between the versions

Dell Backup and Recovery Manager V1.3:
(Launched July, 2010)

- Now supports the ability to create application media backups in accordance with your end-user license agreement
- **Dell Backup and Recovery Manager** no longer needs to reboot into the **Windows Recovery Environment** to create your system backup images. The images are now created within the operating system
- Functional cosmetic enhancements to simplify how a user selects backup media type and storage location
- Added support for Dual Layer DVDs (Windows Vista and Windows 7 only)

NOTE: The 1st dual-layer DVD in a dual-layer set will be a created as single-layer DVD in order to be bootable. However the remaining dual-layer DVDs in the backup set will utilize their full capacity.

- Added support for Blu-ray optical media (Windows Vista and Windows 7 only)

NOTE: Blu-ray support is limited to their use as a high capacity storage medium. Blu-ray disks will not be bootable. To restore a Blu-ray disk backup, you must boot your system from a bootable Dell Recovery disk or another bootable backup image. Do not use for OS or recovery media.

- User's Guide V1.3 Rev. A00 available

Dell Backup and Recovery Manager V1.2.3 (a.k.a. V1.2 A01):
(Launched April, 2010)

- Removed the hardware diagnostics support because system-specific diagnostics are already provided on the system in the Utility Partition and updates are available from support.dell.com
- User's Guide V1.2 Rev. A01 available

Dell Backup and Recovery Manager V1.2.2:
(Launched February, 2010)

- Updated Vista SP1 OS Media to Vista SP2 OS Media. No other changes.

Dell Backup and Recovery Manager V1.2.1:
(Launched January, 2010)

- Web-post versions of V1.2 - Allows existing factory-installed versions to be updated or upgraded via Windows Installer. For example, a customer will be able to upgrade their system from V1.1 to V1.2.1. The Windows 7 version can be installed on systems that did not have **Dell Backup and Recovery Manager** previously factory-installed. However the functionality is limited to making file and folder backups, and system backups. No OS media image or **Dell Factory Image** is provided in the web-post versions. However if a copy of the **Dell Factory Image** is found on the system, it will be listed among the available backups to use.

Dell Backup and Recovery Manager V1.2:
(Launched January, 2010)

- Adds a separate pop-up application for customer discovery and reminder messaging. Otherwise same features and functionality, and performance as V1.1.
- User's Guide V1.2 Rev. A00 available

Dell Backup and Recovery Manager V1.1:
(Launched October, 2009)

- Adds support for Windows Vista 64-bit, and Microsoft Windows 7 32-bit and 64-bit operating systems
- Supports restoring an image from a bootable backup to an unformatted hard drive. (V1.0 did not support unformatted hard drives.)
- Supports RAID configurations 0, 1, 5 and 10
- Fixes a cosmetic issue in the boot manager used with XP
- Corrects minor screen formatting and localization issues in V1.0
- User's Guide V1.1 Rev. A00 available

Dell Backup and Recovery Manager V1.0:
(Initial launch in May, 2009)

- Supported Microsoft Windows SP SP3 32-bit and Windows Vista SP1 32-bit (no 64-bit support for either operating system)
- User's Guide V1.0 Rev. A00 available

13 Supported Languages

	Dell Backup and Recovery Manager application supports the languages noted below:			
30 Languages	**XP SP3**	**Vista SP1**	**Vista SP2**	**Windows 7**
English	Supported	Supported	Supported	Supported
Dutch	Supported	Supported	Supported	Supported
French	Supported	Supported	Supported	Supported
German	Supported	Supported	Supported	Supported
Italian	Supported	Supported	Supported	Supported
Japanese	Supported	Supported	Supported	Supported
Korean	Supported	Supported	Supported	Supported
Traditional Chinese	Supported	Supported	Supported	Supported
Spanish	Supported	Supported	Supported	Supported
Swedish	Supported	Supported	Supported	Supported
Simplified Chinese	Supported	Supported	Supported	Supported
Arabic	Supported	Supported	Supported	Supported
Danish	Supported	Supported	Supported	Supported
Norwegian	Supported	Supported	Supported	Supported
Polish	Supported	Supported	Supported	Supported
Brazilian Portuguese	Supported	Supported	Supported	Supported
Russian	Supported	Supported	Supported	Supported
Czech	Supported	Supported	Supported	Supported
Finnish	Supported	Supported	Supported	Supported
Greek	Supported	Supported	Supported	Supported
Hebrew	Supported	Supported	Supported	Supported
Hungarian	Supported	Supported	Supported	Supported
Iberian Portuguese	Supported	Supported	Supported	Supported
Romanian		Supported		Supported
Turkish	Supported	Supported	Supported	Supported
Slovenian		Supported		Supported
Slovakian		Supported		Supported
Croatian		Supported		Supported
Thai		Supported		Supported
Traditional Chinese- Hong Kong	Supported	Supported	Supported	Supported

14 Why do I need to back up?

Important files can be unexpectedly lost by accidentally erasing or replacing them. You can also be victimized by a virus or worm attack, or a software or hardware failure including a complete hard disk failure. While these events may be rare, they are unpredictable because they can occur anytime and usually at the worst time. That is why you need to make regular and frequent backups of your files, programs, system settings, etc.

It is strongly recommended that you follow these general guidelines:

- When you first get your system,
  - Create your OS and application media backup copies.
  - Create your recovery media copy with your **Dell Factory Image** included.

- Back up your business and/or personal files daily. Keep your last 5 backups.

- Back up your system weekly and again…
  - Before updating drivers, making any system registry changes, or installing a major service pack.
  - After any system security updates and patches are installed
  - Before you install any new software (in case the software misbehaves)
  - After you install any new software

  Keep at least your last 3 system backup images.

- Keep your anti-virus software up-to-date

- Backup to an external drive (preferred) or DVDs. External USB drives are reliable, convenient, commonly available, and a good value.

- Do not backup to the same drive or partition where your operating system resides in case your drive becomes infected by a virus or damaged.

- Set up regular restore points in Windows.

15 Backup Options Summary

What do you want to backup?	What do I use?	Notes:
Personal files, e.g. pictures, music, and documents from any hard drive partition	1. **DBRM** File Backup and Restore 2. Windows XP **Backup,** or Microsoft Windows Vista or Windows 7 **Back Up Files** wizard	
Operating System Partition only including all programs and data stored there.	1. **DBRM** Backup System 2. Windows XP **Backup** or Microsoft Windows Vista or Windows 7 **Back Up Files** wizard	
Entire computer including all hard disk partitions	**Windows Complete PC Backup**	Windows Complete PC Backup is not available in all OS versions.
Original application media	**DBRM Dell Recovery Tools > Create OS and application media backup …**	This will make a copy of your original application media disks.

16 Restore Options Summary

How do get back to these states?	What do I use to restore/reinstall?	Notes:
Dell Factory Image including OS, and all drivers and applications installed when your system was built in the Dell factory (Microsoft Windows Vista and Windows 7 only)	1. **DBRM** Restore System to restore **Dell Factory Image** 2. **DBRM Recovery Disk** to restore **Dell Factory Image** 3. **DBRM WinRE** to restore **Dell Factory Image**	Does not include any applications or data you may have added since your system was received from Dell.
Original Windows operating system image (does not install your Dell system drivers)	1. **DBRM OS media** disk 2. Original Windows OS media (if provided in your system box)	
Original Windows operating system and Dell system drivers	**DBRM OS Media disk** and install Dell system drivers from **Drivers** folder also on DBRM OS Media disk	
Original applications	1. **DBRM application media** disks 2. Original application media (if provided in your system box)	
Most recent backup state for OS partition	**DBRM** Restore System to restore most recent saved image. Then **DBRM** File Restore to restore most recent data file backup.	DBRM restore system options are also available from WinRE (Microsoft Windows Vista and Windows 7) if Windows is corrupted.
Most recent state of entire computer including all hard disk partitions	Microsoft's **Complete PC Restore**	Complete PC Restore is also available from WinRE (Microsoft Windows Vista and Windows 7) if Windows is corrupted.
An earlier point in time when my system was working well	Microsoft's **Restore System**	Uses restore points as a way to undo system changes that may have negatively impacted your system. It does not restore personal files or data. Also available from WinRE if Windows is corrupted.