

System Backup with Windows 7

Short Description:

Windows 7 offers built-in full-system Backup and Restore functionality, which is recommended for any user to ensure data integrity.

This tutorial demonstrates how to use backup capabilities of Windows 7 on a basic level with images to clarify the procedure.

Products concerned:

All systems by Fujitsu Technology Solutions shipped with Windows 7.

Description:

A. Introduction:

Any system can lose files by accidentally deleting or replacing them, because of a virus or worm attack, software or hardware failure, or a complete hard disk failure. To protect valuable data, a backup can be created: a set of copies of the files that is stored in a different location from the original files. Windows provides tools for backing up files, program, and system settings.

There are different types of backups:

It is possible to backup personal files, programs, and system settings only. Or a backup of the entire computer can be created so that the computer can be restored to a previous state when necessary.

Windows 7 has the ability to store backups on different storage types, for example hard disk drives (internal or external), other removable discs, or writable DVDs and CDs. Windows 7 Business, Ultimate and Enterprise editions even allow system images to be stored on network drives.

This document only describes how to backup an entire computer onto a set of DVDs and restore that backup afterwards, because this is probably the most common backup strategy.

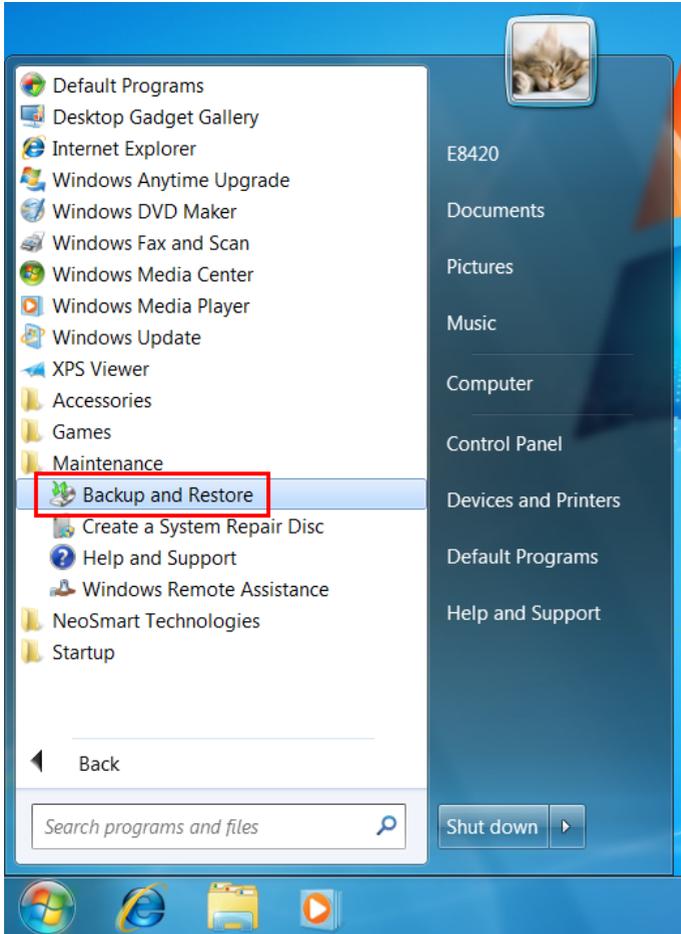
For more information about backing up files only, or backup of an entire computer to other media, please refer to the Help and Support information available within Windows 7 itself.

B. Windows full-system Backup:

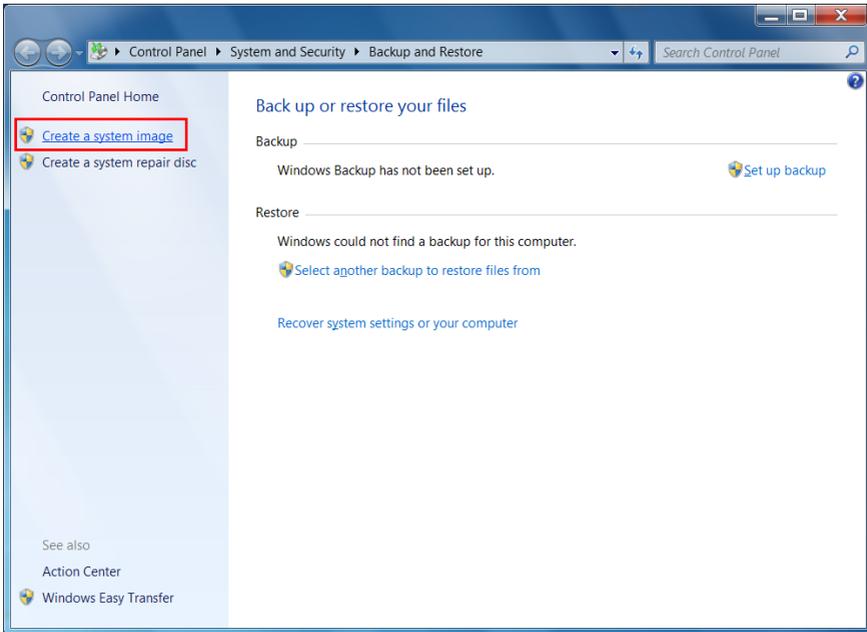
After the computer has been first set up, it is recommended to create a Windows full-system backup image, which is like taking a snapshot of the programs, system settings, and files on the computer. The backup can be used, if the computer ever stops working. It is recommended to update the Windows full-system backup image every six months.

Never backup files to a location on the same hard disk that Windows is installed on, because if the computer gets a virus or has a software failure, it might be necessary to reformat the disk and reinstall Windows to recover from the problem which means that the backup image might also be lost.

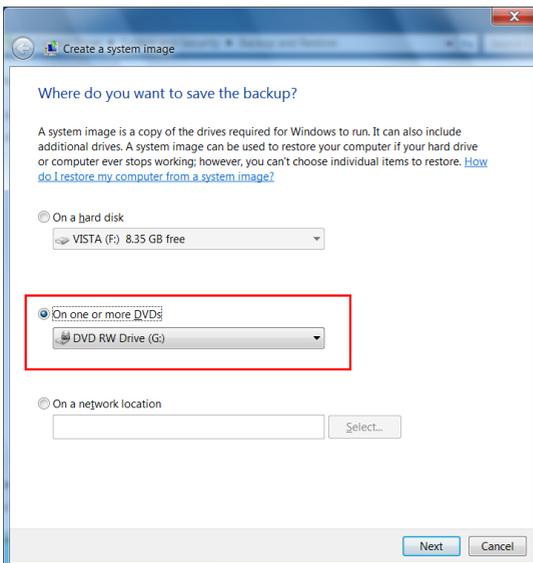
- ▶ Start the Backup tool of Windows 7: Click on the Windows 7 Start menu button, go to "All Programs" -> "Maintenance" and click on "Backup and Restore".



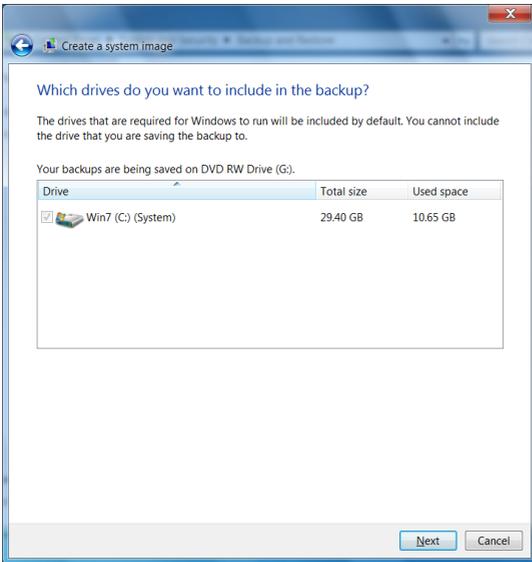
- ▶ A new window with the title "Backup and Restore" opens. On the left side click on "Create a system image".



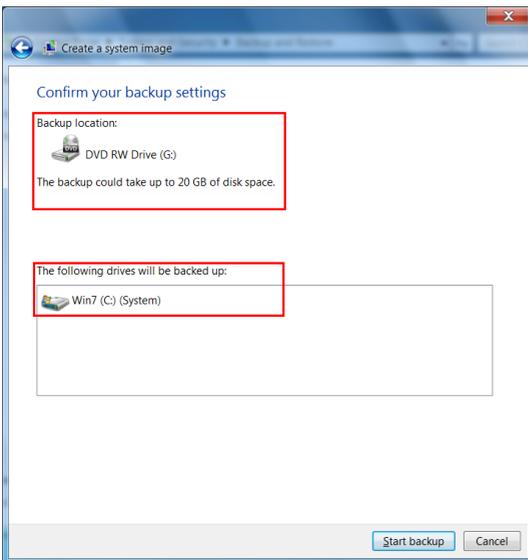
- ▶ "Backup and Restore" searches for available storage types and should present a small list accordingly. Please select the option "On one or more DVDs", which is available when the tool detects at least one drive capable of writing DVDs. Select the disc drive that shall be used for writing the backup data and click on "Next".



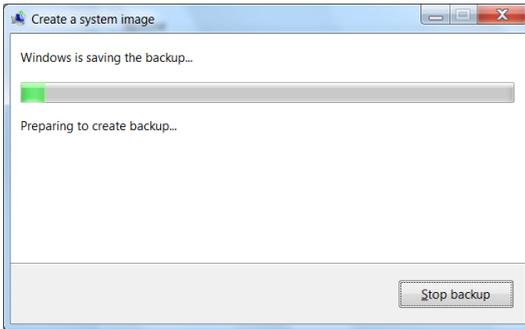
- ▶ A new window should open where you can see all available hard disk drives. Please select all drives which you want to include in the backup. The drive containing the main operating system should already be selected automatically and you will not be able to deactivate this drive. After you finished your selection, please click on "Next".



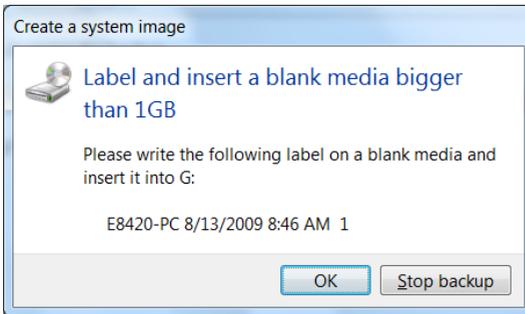
- ▶ A new window should open, asking to confirm the backup settings. The upper half shows some information about how much disc space the backup might take, and the lower half specifies the hard disk drive(s) which will be backed up. Click on "Start backup".



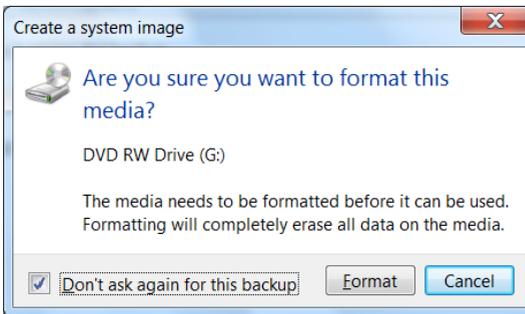
- ▶ The tool is now saving the backup data on the hard disk and preparing to create the backup.



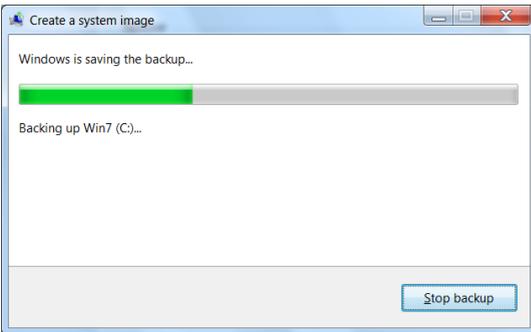
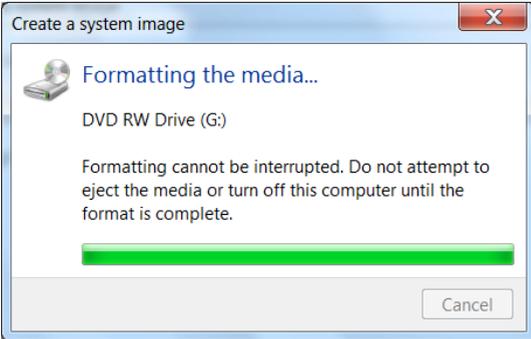
- ▶ After some time the tool prompts to insert the first medium into the drive. Please insert a blank disc providing enough disc space as indicated by the message. Wait for some time until the disc has been detected by the drive and then click on "OK".



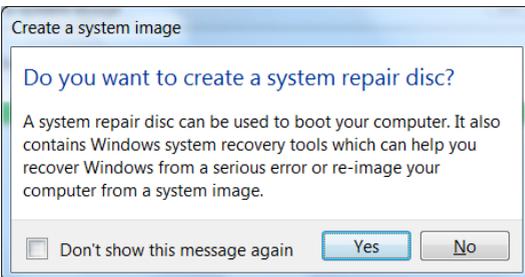
- ▶ Another message prompts asking to confirm that the used medium will be formatted. Enable the option "Don't ask again for this backup" and then click on "Format".



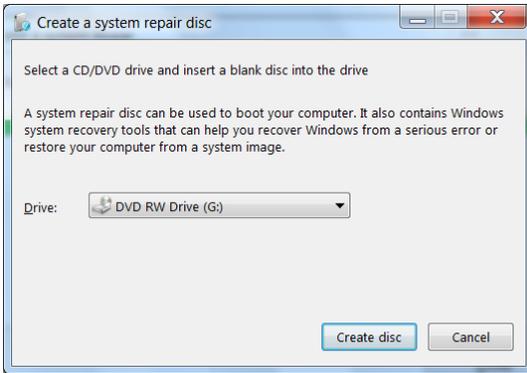
- ▶ Now the tool formats the disc and then writing the backup onto the disc starts, which can take up to 60 minutes or longer for each disc. If the backup does not fit onto one medium, the tool will ask to insert additional media. Please follow the instructions accordingly.



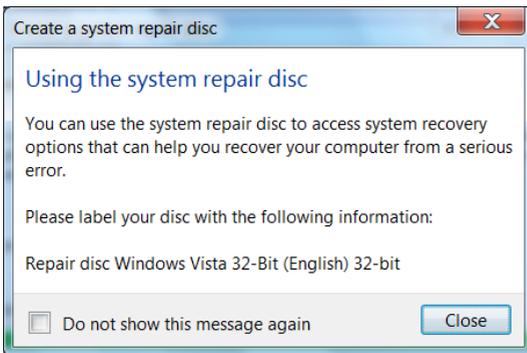
- ▶ After the backup data has been written on the disc(s), a message appears asking you whether you wish to create a system repair disc. It is recommended to let this system repair disc be created to be able to Restore a backup image at a later time. You only need to let the system repair disc be written once; at future backups you can skip this step. During your first backup please click on "Yes".



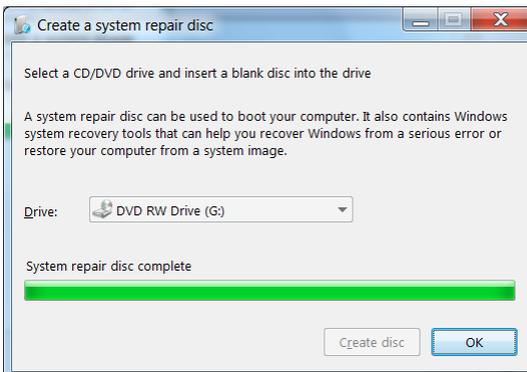
- ▶ A new message appears. Please remove the disc containing your backup files and insert a blank disc where the system repair data will be stored. Wait for some time until the disc is detected by the system and verify that the correct drive is selected. Then click on "Create disc".



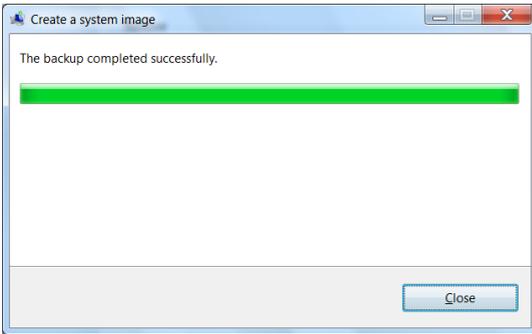
- ▶ After creating the system repair disc has finished successfully, a new window opens containing some information about how to use the disc. Please click on "Close".



- ▶ Confirm the next message by clicking on "OK".



- ▶ After backup has finished successfully, a corresponding message should be visible. Click on "Close" to confirm the message. The "Backup and Restore" tool can also be closed now.



C. Windows full-system Restore:

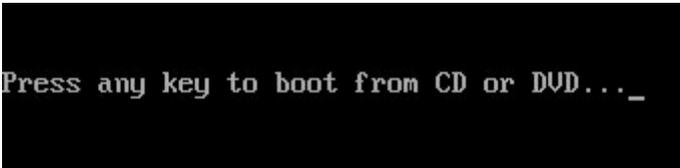
The Windows full-system Restore image created previously contains copies of programs, system settings, and files at the time of the backup. It is a complete backup that can be used to restore the contents of the computer if the hard disk or entire computer ever stops working.

But keep in mind: When the computer is restored from a Windows full-system Restore image, it is a complete restoration. It is not possible to choose individual items to restore, and all of the current programs, system settings, and files (including personal documents) are replaced/deleted.

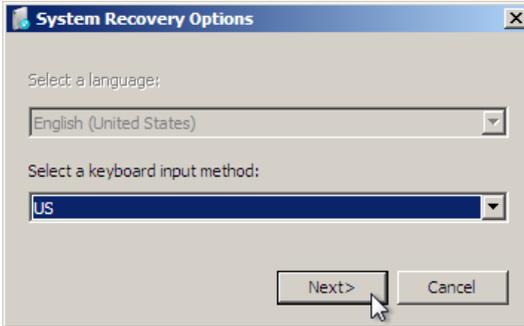
Before starting, make sure that the removable media on which the backup is stored is available.

For Windows full-system Restore the system needs to be booted from the System Repair Disc you have created previously.

- ▶ Turn on the system by pressing the Power Button, and during BIOS POST (when the Fujitsu logo is shown) press <F12> to force display of the Boot Menu.
- ▶ Insert the System Repair Disc.
- ▶ Select the CD/DVD drive by pressing the arrow keys and press <ENTER>. Usually now a message opens asking to press any key to boot from the medium. Press any key now.



- ▶ Now the user interface of the Windows 7 System Repair Disc is loading. After some time a message demands to select the desired keyboard input language. Make your choice and click on "Next".



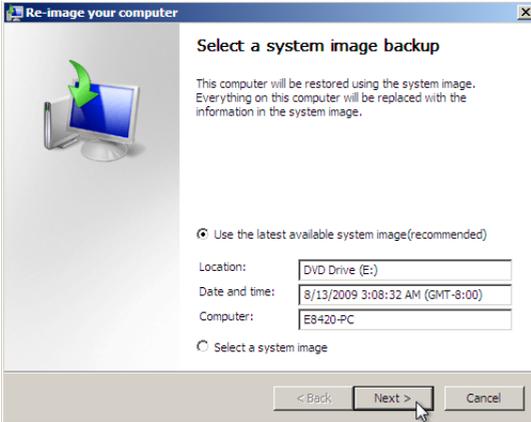
- ▶ The tool now searches for Windows installations available on the hard disk(s).



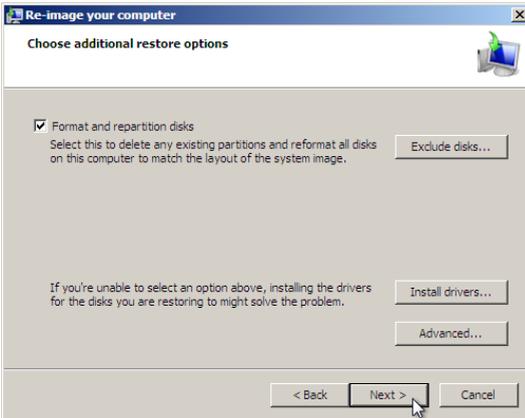
- ▶ Then the tool will present several System Recovery Options. To restore the backup image please first remove the System Repair Disc from your drive and insert the (first) disc containing your backup image files. Wait for some time until the disc is detected by the drive and then select "Restore your computer using a system image that you created earlier". Click on "Next".



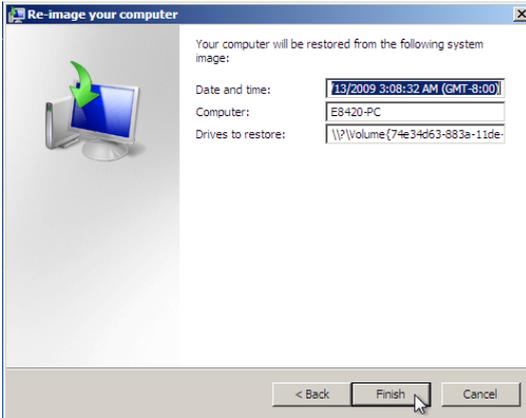
- ▶ After some time a new window opens, where the detected drive and backup image have been automatically selected. Click on "Next".



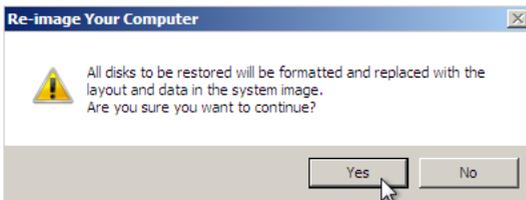
- ▶ The following window asks to choose additional restore options, for example to format and repartition the hard disks during Restore. Please make your choice and then click on "Next".



- ▶ The following window just asks once more to confirm previous settings. Click on "Finish".



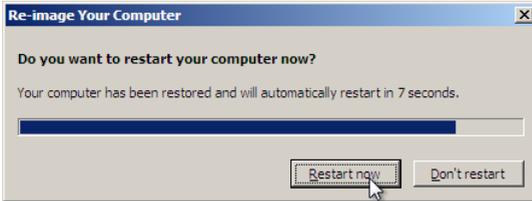
- ▶ Now a warning message demands to confirm that the disks are formatted and the backup is restored resulting in loss of all data currently on the hard disk. To continue with restoring the backup please click on "Yes".



- ▶ Now restoration of the system is starting. If the backup did not fit onto one medium, the tool will ask to insert the other discs of the Restore set. Please follow the instructions accordingly.



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- ▶ After restoration of the backup has been successfully completed, the system reboots automatically or by clicking on "Restart now".



After reboot, the system should be in the exact same state as it was at the time of creating the backup.

Congratulations, the system has been successfully backed up and restored!



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