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## Description of the Windows XP Recovery Console for advanced users

### System Tip ✕

This article applies to a different version of Windows than the one you are using. Content in this article may not be relevant to you. [Visit the Windows 7 Solution Center](#)

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**To continue receiving security updates for Windows, make sure you're running Windows XP with Service Pack 3 (SP3). For more information, refer to this Microsoft web page: [Support is ending for some versions of Windows](#)** (<http://windows.microsoft.com/en-us/windows/help/end-support-windows-xp-sp2-windows-vista-without-service-packs>)

For a Microsoft Windows 2000 version of this article, see [229716](#) (<http://support.microsoft.com/kb/229716/>) .

### Important note

This is an advanced-level reference article that describes what the Recovery Console is and how to use it. It does not contain information about how to troubleshoot specific problems.

To use the Recovery Console, you will need a Windows installation disc.

You must be logged on as an administrator or a member of the Administrators group in order to run the computer in Recovery Console. If your computer is connected to a network, network policy settings may prevent you from completing this procedure. If you encounter this problem, you should contact the network administrator.

## INTRODUCTION

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This article describes the functionality and limitations of the Windows Recovery Console. If a Windows XP-based computer does not start correctly or if it does not start at all, you may be able to use the Windows Recovery Console to help you recover the system software. This article discusses the following topics:

- How to start the Windows Recovery Console from your Windows XP installation disc
- How to use the Command Console
- Restrictions and limitations of the Windows Recovery Console
- The commands that are available in the Windows Recovery Console

## MORE INFORMATION

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When you use the Windows Recovery Console, you can obtain limited access to the NTFS file system, FAT, and FAT32 volumes without starting the Windows graphical user interface (GUI). In the Windows Recovery Console, you can perform the following actions:

- Use, copy, rename, or replace operating system files and folders
- Enable or disable service or device startup the next time that you start your computer
- Repair the file system boot sector or the master boot record (MBR)
- Create and format partitions on drives

**Note** Only an administrator can obtain access to the Windows Recovery Console. This prevents unauthorized users from using any NTFS volume.

### Option 1: If you have already installed the Recovery Console

If you have already installed the Recovery Console, you can select it during your usual Windows Startup. To run the Recovery Console:

1. During Startup, select **Recovery Console** from the startup options menu.
2. If you have a dual-boot or multiboot system, select the installation that you want to access from the Recovery Console.
3. When you are prompted, type the Administrator password.
4. At the command prompt, type Recovery Console commands, and then you can refer to the commands that are listed in the "Available commands within Windows Recovery Console" section.
5. At any time, you can type **Help** for a list of available commands.
6. At any time, you can type **Help commandname** for help on a specific command. For example, you can type **help attrib** to display the help on the attributes command.
7. At any time, you can exit Windows Recovery Console by typing **Exit** at the command line.

### Option 2: Starting the Windows Recovery Console from the Windows XP CD-ROM

If you have not preinstalled the Windows Recovery Console, you can start the computer and use the Recovery Console directly from your original Windows XP installation disc. If your computer is already in Windows and you want to add the Windows Recovery Console as a startup option, go to the next section "Adding the Windows Recovery Console as a startup option."

1. Insert the Windows XP CD into your CD drive and restart your computer. If you are prompted, select any options required to start (boot) from the CD.
2. When the text-based part of Setup begins, follow the prompts. Select the repair or recover option by pressing **R**.
3. If you have a dual-boot or multiboot system, select the installation that you want to access from the Recovery Console.
4. When you are prompted, type the Administrator password.
5. At the command prompt, type Recovery Console commands, and then you can refer to the commands that are listed in the "Available commands within Windows Recovery Console" section.
6. At any time, you can type **Help** for a list of available commands.
7. At any time, you can type **Help commandname** for help on a specific command. For example, you can type **help attrib** to display the help on the attributes command.
8. At any time, you can exit Windows Recovery Console by typing **Exit** at the command line.

### Option 3: Adding the Windows Recovery Console as a startup option

If your computer starts Windows, you can add the Windows XP Recovery Console as a startup option from the Windows environment. To install the Recovery Console as a startup option, follow these steps:

1. With Windows running, insert the Windows CD into your CD drive.
2. Click **Start** and click **Run**.
3. Type the following commands (where X: is the CD Drive letter), and then press **ENTER** on your keyboard.

**X:\i386\winnt32.exe /cmdcons**

**Note** There is a space before **/cmdcons**.

4. Click **OK** and follow the instructions to finish Setup.

**Note** This adds the Windows Recovery Console to the Windows Startup folder.

5. Restart your computer and select the Recovery Console option from the list of available operating systems.

**Important** If you are using software mirroring, see the following article in the Microsoft Knowledge Base:

[229077](http://support.microsoft.com/kb/229077/) (http://support.microsoft.com/kb/229077/ ) Mirroring prevents pre-installing the Recovery Console

[222478](http://support.microsoft.com/kb/222478/) (http://support.microsoft.com/kb/222478/ ) Creating a template to run Recovery Console using a remote install server

### Restrictions and limitations of the Recovery Console

When you use the Windows Recovery Console, you can use only the following items:

- The root folder
- The %SystemRoot% folder and the subfolders of the Windows installation that you are currently logged on to
- The Cmdcons folder
- The removable media drives such as the CD drive or the DVD drive

**Note** If you try to access other folders, you may receive an "Access Denied" error message. This does not necessarily mean that data that is contained in those folders is lost or corrupted. It only means that the folder is unavailable while you are running the Windows Recovery Console. Also, when you are using the Windows Recovery Console, you cannot copy a file from the local hard disk to a floppy disk. However, you can copy a file from a floppy disk or from a CD-ROM to a hard disk, and you can copy a file from one hard disk to another hard disk.

### Using the Command Console within Windows Recovery Console

The Recovery Console gives you limited access to the NTFS file system, FAT, and FAT32 volumes. Recovery Console prevents the familiar Windows Graphical User Interface (GUI) from loading in order to repair and recover Windows functionality.

After you start the Windows Recovery Console, you receive the following message:

```
Microsoft Windows(R) Recovery Console
```

```
The Recovery Console provides system repair and recovery functionality.  
Type EXIT to exit the Recovery Console and restart the computer.
```

```
1: C:\WINDOWS
```

Which Windows Installation would you like to log on to ?  
(To cancel, press ENTER)

Enter the number for the appropriate Windows installation. In this example, you would press **1**. Then, Windows prompts you to enter the Administrator account password.

**Note** If you use an incorrect password three times, the Windows Recovery Console closes. Also, if the Security Accounts Manager (SAM) database is missing or damaged, you cannot use the Windows Recovery Console because you cannot be authenticated correctly. After you enter your password and the Windows Recovery Console starts, type **Exit** to restart the computer.

When you use Windows XP Professional, you can set group policies to enable automatic administrative logon. For more information about how to set Recovery Console to enable automatic administrative logon, click the following article number to view the article in the Microsoft Knowledge Base:

[312149](http://support.microsoft.com/kb/312149/) (<http://support.microsoft.com/kb/312149/>) How to enable an administrator to log on automatically in Recovery Console

### Available commands within Windows Recovery Console

The following commands are available within the Windows Recovery Console. The commands are not case-sensitive.

**Warning** Some of these commands can make your system inoperable. Read the whole explanation of any command before you enter it onto the command line. Seek the advice of a support professional if you have any questions or concerns about a particular command.

#### HELP

Use the **help** command to list all the following supported commands:

attrib	del	fixboot	more	set
batch	delete	fixmbr	mkdir	systemroot
bootcfg	dir	format	more	type
cd	disable	help	net	
chdir	diskpart	listsvc	rd	
chkdsk	enable	logon	ren	
cls	exit	map	rename	
copy	expand	md	rmdir	

#### ATTRIB

Use the **attrib** command together with one or more of the following parameters to change the attributes of a file or a folder:

- R
- +R
- S
- +S
- H
- +H
- C

+C

### Notes

- + Sets an attribute
- Resets an attribute
- R** Read-only file attribute
- S** System file attribute
- H** Hidden file attribute
- C** Compressed file attribute

You must set or clear at least one attribute.

To view attributes, use the **dir** command.

### BATCH

**batch** *inputfile* [*outputfile*]

Use this command to run commands that are specified in a text file. In the command syntax, *inputfile* specifies the text file that contains the list of commands to be run, and *outputfile* specifies the file that contains the output of the specified commands. If you do not specify an output file, the output appears on the screen.

### BOOTCFG

Use this command for boot configuration and recovery. This command has the following options:

```
bootcfg /add
bootcfg /rebuild
bootcfg /scan
bootcfg /list
bootcfg /disablereirect
bootcfg /redirect [portbaudrate] | [useBiosSettings]
```

Examples:

```
bootcfg /redirect com1 115200
```

```
bootcfg /redirect useBiosSettings
```

You can use the following options:

- /add** Adds a Windows installation to the boot menu list.
- /rebuild** Iterates through all Windows installations so that you can specify which installations to add.
- /scan** Scans all disks for Windows installations and displays the results so that you can specify which installations to add.
- /default** Sets the default boot entry.
- /list** Lists the entries already in the boot menu list.
- /disablereirect** Disables redirection in the boot loader.
- /redirect** Enables redirection in the boot loader, with the specified configuration.

### CD and CHDIR

Use the **cd** and **chdir** commands to change to a different folder. For example, you can use the following commands:

Type **cd ..** to change to the parent folder.

Type **cd drive:** to display the current folder in the specified drive.

Type **cd** without parameters to display the current drive and folder.

The **chdir** command treats spaces as delimiters. Because of this, you must put quotation marks (") around a folder name that contains a space. The following is an example:

```
cd "\\windows\profiles\username\programs\start menu"
```

The **chdir** command works only in the system folders of the current installation of Windows, in removable media, in the root folder of any hard disk partition, or in the local installation sources.

## CHKDSK

```
chkdsk drive /p /r
```

The **chkdsk** command checks the specified drive and repairs or recovers the drive if the drive requires it. The command also marks any bad sectors and it recovers readable information.

You can use the following options:

- /p** Does an exhaustive check of the drive and corrects any errors.
- /r** Locates bad sectors and recovers readable information.

**Note** If you specify the **/r** option, the **/p** option is implied. When you specify the **chkdsk** command without arguments, the command checks the current drive with no options in effect.

When you run the **chkdsk** command, you must use the Autochk.exe file. CHKDSK automatically locates this file in the startup folder. If the Command Console was preinstalled, the startup folder is typically the Cmdcons folder. If CHKDSK cannot find Autochk.exe in the startup folder, CHKDSK tries to locate the Windows installation disc. If it cannot find the installation media, CHKDSK prompts you for the location of the Autochk.exe file.

## CLS

Use this command to clear the screen.

## COPY

```
copy source destination
```

Use this command to copy a file. In the command syntax, *source* specifies the file to copy and *destination* specifies the folder or file name for the new file. You cannot use wildcard characters indicated by an asterisk (\*), and you cannot copy a folder. If you copy a compressed file from the Windows installation disc, the file is automatically decompressed while it is copied.

The source of the file can be removable media, any folder in the system folders of the current Windows installation, the root of any drive, the local installation sources, or the Cmdcons folder.

If *destination* is unspecified, the default destination is the current folder. If the file already exists, you are prompted whether you want the copied file to overwrite the existing file. The destination cannot be removable media.

## DEL and DELETE

```
del drive: path filename
```

**delete *drive: path filename***

Use this command to delete a file. In the command syntax, *drive: path filename* specifies the file that you want to delete. The **delete** command works only in the system folders of the current Windows installation, in removable media, in the root folder of any hard disk partition, or in the local installation sources. The **delete** command does not accept wildcard characters.

**DIR****dir *drive: path filename***

Use this command to display a list of files and subfolders in a folder. In the command syntax, *drive: path filename* specifies the drive, folder, and files to list. The **dir** command lists all files, including hidden files and system files. Files can have the following attributes:

- D** Directory
- H** Hidden file
- S** System file
- E** Encrypted
- R** Read-only file
- A** Files ready for archiving
- C** Compressed
- P** Reparse point

The **dir** command works only in the system folders of the current Windows installation, in removable media, in the root folder of any hard disk partition, or in the local installation sources.

**DISABLE****disable *servicename***

Use this command to disable a Windows system service or a driver. In the command syntax, *servicename* specifies the name of the service or driver that you want to disable.

Use the **listsvc** command to display all services or drivers that are eligible to be disabled. The **disable** command prints the old start type of the service before resetting the start type to SERVICE\_DISABLED. Record the old start type if you must enable the service again.

The **disable** command displays the following start\_type values:

- SERVICE\_DISABLED
- SERVICE\_BOOT\_START
- SERVICE\_SYSTEM\_START
- SERVICE\_AUTO\_START
- SERVICE\_DEMAND\_START

**DISKPART****diskpart /add/deletedevice\_name drive\_name partition\_name size**

Use this command to manage the partitions on your hard disk volumes. You can use the following options:

- /add** Creates a new partition.
- /delete** Deletes an existing partition.
- device\_name** The name of the device that is used to create a new partition.

n.

***drive\_name*** A drive-letter-based name, for example D:.

***partition\_name*** The partition-based name for deleting an existing partition.

***size*** The size of the new partition in megabytes.

You can determine the device name from the output of the MAP command, for example, \Device\HardDisk0. You can use the partition name instead of the drive name argument, for example, \Device\HardDisk0\Partition1. If you use no arguments, a user interface for managing your partitions appears.

**Warning** If you use this command on a disk that has a dynamic disk configuration, you may damage the partition table. Do not modify the structure of dynamic disks unless you are using the Disk Management tool.

## ENABLE

***enable servicename start\_type***

You can use the **enable** command to enable a Windows system service or a driver.

Use the **listsvc** command to display all eligible services or drivers to enable. The **enable** command prints the old start type of the service before it is reset to the new value. It is a good idea to note the old value, in case you have to restore the start type of the service.

Valid options for *start\_type* are as follows:

SERVICE\_BOOT\_START

SERVICE\_SYSTEM\_START

SERVICE\_AUTO\_START

SERVICE\_DEMAND\_START

If you do not specify a new start type, the **enable** command prints the old start type for you.

## EXIT

Use the **exit** command to exit the Recovery Console and restart your computer.

## EXPAND

***expand source [/F:filespec] [destination] [/y]***

***expand source [/F:filespec] /D***

Use this command to expand a file. In the command syntax, *source* specifies the name of the file to be expanded and *destination* specifies the folder for the new file. If you do not specify a destination, the command uses the current folder by default. You cannot include wildcard characters.

You can use the following options:

**/y** Do not prompt before overwriting an existing file.

**/f:filespec** Identifies the files to be expanded.

**/d** Do not expand; display only a directory of the files in the source.

If the source contains more than one file, you must use the **/f:filespec** parameter to find the specific files to be expanded. You can include wildcard characters.

The destination can be any folder in the system folders of the current Windows installation, in the root of the drive, in the local installation sources, or in the

Cmdcons folder. The destination cannot be removable media, and the destination file cannot be read-only. Use the **attrib** command to remove the read-only attribute.

Unless you use the **/y** option, the **expand** command prompts you if the destination file already exists.

## FIXBOOT

**fixboot** *drive name*:

Use this command to write the new Windows boot sector code on the system partition. In the command syntax, *drive name* is the drive letter where the boot sector will be written. This command fixes damage in the Windows boot sector. This command overrides the default setting, which writes to the system boot partition. The **fixboot** command is supported only on x86-based computers.

## FIXMBR

**fixmbr** *device name*

Use this command to repair the MBR of the boot partition. In the command syntax, *device name* is an optional device name that specifies the device that requires a new MBR. Use this command if a virus has damaged the MBR and Windows cannot start.

**Warning** This command can damage your partition tables if a virus is present or if a hardware problem exists. If you use this command, you may create inaccessible partitions. We recommend that you run antivirus software before you use this command.

You can obtain the device name from the output of the **map** command. If you do not specify a device name, the MBR of the boot device is repaired, for example:

```
fixmbr \device\harddisk2
```

If the **fixmbr** command detects an invalid or non-standard partition table signature, **fixmbr** command prompts you for permission before it rewrites the MBR. The **fixmbr** command is supported only on x86-based computers.

## FORMAT

**format** *drive*: **/Q /FS:file-system**

Use this command to format the specified drive to the specified file system. In the command syntax, **/Q** performs a quick format of the drive, *drive* is the drive letter of the partition to format, and **/FS:file-system** specifies the type of file system to use such as FAT, FAT32, or NTFS. If you do not specify a file system, the existing file system format is used if it is available.

## LISTSVC

The **listsvc** command lists all available services, drivers, and their start types for the current Windows installation. This command is useful together with the **disable** and **enable** commands.

The list is extracted from the %SystemRoot%\System32\Config\System hive. If the System hive is damaged or missing, the results are unpredictable.

## LOGON

### **logon**

The **logon** command lists all detected installations of Windows and then requests the local administrator password for the copy of Windows that you want to log on to. If your first three tries to log on fail, the console closes, and your computer restarts.

### **MAP**

#### **map *arc***

Use this command to list drive letters, file system types, partition sizes, and mappings to physical devices. In the command syntax, the *arc* parameter tells the **map** command to use ARC paths instead of Windows Device paths.

### **MD and MKDIR**

The **md** and **mkdir** commands create new folders. Wildcard characters are not supported. The **mkdir** command works only in the system folders of the current installation of Windows, in removable media, in the root folder of any hard disk partition, or in the local installation sources.

### **MORE**

#### **more *filename***

Use this command to display a text file to the screen.

### **NET**

Although the Help file states otherwise, the **net** command is not usable from the Recovery Console. The protocols stack is not loaded for the Recovery Console. Therefore, there is no networking function available.

### **RD and RMDIR**

Use **rd** and **rmdir** commands to delete a folder. These commands work only in the system folders of the current Windows installation, in removable media, in the root folder of any hard disk partition, or in the local installation sources.

### **REN and RENAME**

Use the **ren** and **rename** commands to rename a file.

**Note** You cannot specify a new drive or path for the renamed file. These commands work only in the system folders of the current Windows installation, in removable media, in the root folder of any hard disk partition, or in the local installation sources.

### **SET**

You can use the **set** to display or modify four environment options.

AllowWildCards = FALSE AllowAllPaths = FALSE AllowRemovableMedia =  
FALSE NoCopyPrompt = FALSE

For more information about how to use the set command, click the following article number to view the article in the Microsoft Knowledge Base:

[235364](http://support.microsoft.com/kb/235364/) (<http://support.microsoft.com/kb/235364/>) Description of the SET command in Recovery Console

### **SYSTEMROOT**

The **systemroot** command sets the current working folder to the %SystemRoot% folder of the Windows installation that you are currently logged on to.

**TYPE**

**type filename**

Use the **type** command to display a text file.

**REFERENCES**

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For a Microsoft Windows 2000 version of this article, see [229716](#)  
(<http://support.microsoft.com/?scid=kb;%5Bln%5D;229716>) .

For more information about the Recovery Console, visit the following Microsoft Web site:

<http://technet.microsoft.com/en-us/library/cc776139.aspx>  
(<http://technet.microsoft.com/en-us/library/cc776139.aspx>)

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