

Converting a basic disk to dynamic

Configuring Basic and Dynamic Disks

Windows Server 2012 R2 supports two types of disk configurations: basic and dynamic. Basic disks are divided into partitions and can be used with previous versions of Windows. Dynamic disks are divided into volumes and can be used with Windows 2000 Server and newer releases.

When a disk is initialized, it is automatically created as a basic disk, but when a new fault-tolerant (RAID) volume set is created, the disks in the set are converted to dynamic disks. Fault-tolerance features and the ability to modify disks without having to reboot the server are what distinguish dynamic disks from basic disks.

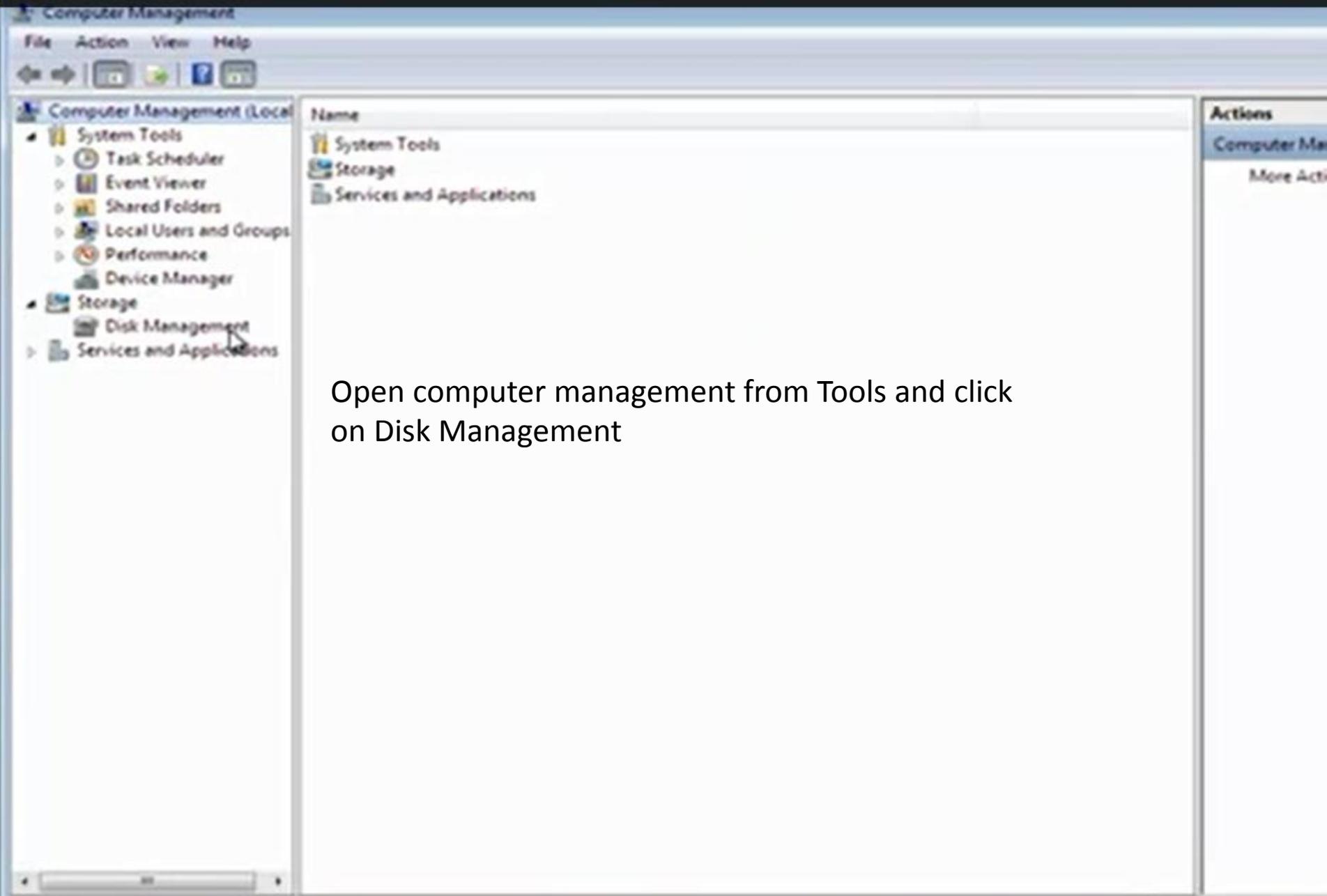
A basic disk can simply be converted to a dynamic disk without loss of data. When a basic disk is converted, the partitions are automatically changed to the appropriate volumes. However, converting a dynamic disk back to a basic disk is not as simple. First, all the data on the dynamic disk must be backed up or moved. Then, all the volumes on the dynamic disk have to be deleted. The dynamic disk can then be converted to a basic disk. Partitions and logical drives can be created, and the data can be restored.

The following are actions that can be performed on basic disks:

- Formatting partitions
- Marking partitions as active
- Creating and deleting primary and extended partitions
- Creating and deleting logical drives
- Converting from a basic disk to a dynamic disk

The following are actions that can be performed on dynamic disks:

- Creating and deleting simple, striped, spanned, mirrored, or RAID-5 volumes
- Removing or breaking a mirrored volume
- Extending simple or spanned volumes
- Repairing mirrored or RAID-5 volumes
- Converting from a dynamic disk to a basic disk after deleting all volumes



Open computer management from Tools and click on Disk Management

The screenshot shows the Windows Computer Management console. The left pane shows the navigation tree with 'Disk Management' selected. The main pane displays a table of volumes and a detailed view of Disk 0. A context menu is open over Disk 0, with 'Convert to Dynamic Disk...' highlighted.

Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	5
New Volume (G:)	Simple	Basic	NTFS	Healthy (Primary Partition)	2:
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	1:

Volume	Layout	Type	File System	Status
New Volume (G:)	Simple	Basic	NTFS	Healthy (Primary Partition)

Legend: ■ Unallocated ■ Primary partition

Right click on Disk 0 and click Convert to Dynamic Disk

The screenshot shows the Windows Computer Management console. A dialog box titled "Convert to Dynamic Disk" is open in the center. The dialog contains the text "Select one or more basic disks to convert to dynamic disks." and a list of disks with a checkbox next to "Disk 0" which is checked. Below the list are "OK" and "Cancel" buttons. In the background, a table lists disk volumes:

Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	5
New Volume (G:)	Simple	Basic	NTFS	Healthy (Primary Partition)	1:
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	1:

Below the table, the details for "Disk 0" are shown: Basic, 74.53 GB, Online. Below that, "CD-ROM 0 DVD (E:)" is shown with "No Media". At the bottom, a legend indicates "Unallocated" (black square) and "Primary partition" (blue square).

Select the disk to convert and click on ok

The screenshot shows the Windows Computer Management console. In the background, a table lists disk volumes:

Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	5
New Volume (G:)	Simple	Basic	NTFS	Healthy (Primary Partition)	2:
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	1:

In the foreground, the 'Disks to Convert' dialog box is open. It contains the following text and table:

The disks that will be made dynamic are shown in the following list.

Disks:

Name	Disk Contents	Will Convert
Disk 0	System Partition, Boot Partition, ...	<input checked="" type="checkbox"/> Yes

Buttons: Details..., Convert, Cancel

Legend: ■ Unallocated ■ Primary partition

Click on convert

The screenshot shows the Windows Computer Management console. The left pane shows the navigation tree with 'Disk Management' selected. The main pane displays a table of volumes and their properties. A 'Disks to Convert' dialog box is open, listing 'Disk 0' for conversion. A 'Disk Management' warning dialog is overlaid on top, with the text: 'After you convert these disks to dynamic, you will not be able to start installed operating systems from any volume on these disks (except the current boot volume). Are you sure you want to convert?' The 'Yes' button is highlighted.

Volume	Layout	Type	File System	Status	C
(C:)	Simple	Basic	NTFS	Healthy (Boot, Page File, Crash Dump, Primary Partition)	5
New Volume (G:)	Simple	Basic	NTFS	Healthy (Primary Partition)	2:
System Reserved	Simple	Basic	NTFS	Healthy (System, Active, Primary Partition)	1:

Disks to Convert

The disks that will be made dynamic are shown in the following list.

Disks:

Name	Disk Contents	Will Convert
Disk 0		

After you convert these disks to dynamic, you will not be able to start installed operating systems from any volume on these disks (except the current boot volume).

Are you sure you want to convert?

Yes No

Click yes on the message shown

The screenshot shows the Windows Computer Management console. The left-hand tree view is expanded to 'Storage' > 'Disk Management'. The main pane displays a table of volumes on Disk 0. The table has columns for Volume, Layout, Type, File System, and Status. The volumes listed are (C:), New Volume (G:), and System Reserved, all of which are Dynamic disks with NTFS file systems. Below the table, a detailed view of Disk 0 is shown, indicating it is a Dynamic disk with a total size of 74.53 GB and is Online. The disk is partitioned into three volumes: System Reserved (100 MB NTFS, Healthy (System)), (C:) (54.90 GB NTFS, Healthy (Boot, Page File, Crash Dump)), and New Volume (G:) (19.53 GB NTFS, Healthy). A legend at the bottom indicates that black represents Unallocated space and green represents Simple volume.

Volume	Layout	Type	File System	Status
(C:)	Simple	Dynamic	NTFS	Healthy (Boot, Page File, Crash Dump)
New Volume (G:)	Simple	Dynamic	NTFS	Healthy
System Reserved	Simple	Dynamic	NTFS	Healthy (System)

■ Unallocated ■ Simple volume

The dynamic disk appears in the disk management window