

Using GPT Drives (Microsoft Corporation)

GPT Gisk

A GPT disk uses the GUID partition table (GPT) disk partitioning system. A GPT disk offers these benefits:

- Allows up to 128 primary partitions. (MBR disks can support up to four primary partitions and an infinite number of partitions inside an extended partition.)
- Allows a much larger volume size - greater than 2 TB, which is the limit for MBR disks.
- Provides greater reliability due to replication and cyclical redundancy check (CRC) protection of the partition table.
- Can be used as a storage volume on all x64-based platforms, including platforms running Microsoft Windows XP Professional x64 Edition. Windows Server 2003 SP1 also enables support for GPT in x86 versions of the Windows Server 2003 family.

Notes:

- Unlike Windows support for the Intel Itanium platform, Windows x64 Edition and Windows Server 2003 SP1 operating systems support the use of GPT drives only as data volumes. Because the x64 and x86 architectures do not provide support for an EFI boot partition, you cannot use a GPT drive to boot an x64-based computer or an x86-based computer with a legacy BIOS. Therefore, computers running these operating systems must be equipped with more than one physical driver to allow the use of the GPT disk format.
- On Intel Itanium platforms, Windows supports the use of GPT drives as boot drives or data volumes.

Creating GPT Drives

You can convert only empty, unpartitioned disks (raw drives or empty MBR drives) to the GPT format. To convert a volume that contains data, you must first manually delete the partition.

You can use the following methods to create GPT disks:

- In the Disk Management console, right-click the MBR drive you want to convert to GPT and click **Convert to GPT Disk**. If the drive is not empty or contains partitions, this option is unavailable.
- OR-
- In the DISKPART utility, select the drive you want to convert and enter the following command:
CONVERT GPT

For raw disks, you can use two additional methods:

- After installing a new raw disk, open the Disk Management console to launch a wizard that you can use to configure the new disk. The wizard includes options to initialize the disk as MBR or GPT.
- OR-
- Initialize the new disk later by using the **Initialize Disk** option in the Disk Management console.

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Note: Installing a Windows x64 Edition operating system on a GPT disk is not supported. Attempting to do so yields an error. Although Setup allows you to choose a GPT disk partition on the partition selection screen during Text Mode Setup, doing so displays an error message. To assist users in avoiding this error, the partition selection screen clearly indicates whether the partition is configured as an MBR drive or a GPT drive.

Examining Drive Configurations

You can use the following methods to determine whether a drive is configured as a GPT or an MBR disk:

- In the Disk Management console, on the **View** menu, point to **Top**, and then click **Disk List**. The upper pane displays a list of disk drives that specifies the partition style in the last column.
- In the Disk Management console, right-click the drive to display conversion options.
- If the drive is configured as an unpartitioned GPT disk, the **Convert to MBR Disk** option appears. If the drive is partitioned, this option is unavailable.
- If the drive is configured as an unpartitioned MBR disk, the **Convert to GPT Disk** option appears. If the drive is partitioned, this option is unavailable.
- In the Disk Management console, right-click the driver, click **Properties**, and then click the **Volume** tab to display the partition style and other information.
- In Device Manager, right-click the drive and, on the **Volume** tab, click **Populate** to display the partition style and other information.
- Launch the DiskPart utility and enter the command list disk. The disk list indicates GPT or MBR in the last column of the command output.