# MBR and GPT Demonstration

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This video will look at how to configure drives to use the GPT and MBR partition tables on Windows 8 and Windows 2012. This will be done using the GUI and the command line.

Demonstration

**Demonstration Windows 8**

The disk management tool can be run by itself or as part of computer management. To open computer manager, open Windows Explorer, right click on computer and select the option manage.

Disk Management can be found under storage in Computer management. This tool will show you all the drives that are currently connected to that computer and allow you to perform administration on them like creating partitions and formatting.

When a new drive is added to Windows, this will appear in Disk Management as not initialized. The process of initializing the drive writes a signature on the drive. This means that if the drive is moved to a different controller inside the computer, Windows will recognize this as the same drive even though it is on a different controller. If the drive is moved to a different computer, Windows will be able to recognize this as a foreign drive to that computer and is up to administrator to decide if they want to use it.

To initialize a drive, right click the drive and select the option Initialize Disk. This will show you all the drives on the system that are currently not initialized. The process of initializing the drive also creates a partition table. On this screen you will need to decide if you want to use the MBR or GPT partition table. If you have multiple drives in the system that have not been initialized, it is just a matter of selecting the drives that you want initialized and they will all be initialized at once.

If the drive data does not have any partitions created on it, you can right click the drive and you will get the option to convert it to GPT or MBR - the opposite of the

current partition table used on that drive at the time. If partitions are on the drive, the option will be grayed out and you will need to delete these partitions before you can use this option.

If you want to see which partition table that is currently being used on that drive, right click the drive and select properties. In the properties, select the volume tab. On the volume tab the partition table will be listed next to partition style.

**Demonstration Windows Server 2012**

To access disk management in Windows Server 2012, open Server Manager and then select Computer Management from the tools menu. Once in computer management select Disk Management under Storage.

Even though Disk Management will essentially work the same in any editions of Windows, Windows Server 2012 has a policy that is set differently than on the desktop versions of Windows. When a new drive is added to Windows Server 2012 you will see a message stating "Offline (The disk is offline because of policy set by an administrator". In order to use the drive, the administrator will have to right click the drive and select online. This is to prevent a drive accidently being added to the server and causing unexpected results. Essentially it adds an extra step and adds a little bit more security to the server. The biggest reason for this is the SAN (Storage Area Network) could share the same drive to multiple servers. If two servers access the same drive at the same time this can cause problems and is not recommended when it can be avoided.

To change the disk policy in Windows Server 2012, this needs to done using DiskPart. This can be run by opening a command prompt and running DiskPart.

To see the current SAN policy in DiskPark run the command SAN. To change the policy enter in SAN POLICY=OnlineAll or SAN POLICY=OfflineShared.

Disk Management can also be run as a separate application rather than as part of Computer Management. To do this, run diskmgmt.msc from run.

If you right click a drive on Disk Management you have the option to online or offline the drive. If the drive is online, you also have the option "Initialize Disk" if the disk has not been initialized before. You will then be asked if you want to use an MBR or GPT partition table.

**Demonstration DiskPart**

"List Disk". This will show all the disks that are currently connected to that system.

"Select Disk n". This command will select a disk in the system where n is the drive. To obtain the drive number, use the list disk command.

"convert gpt". This will convert the currently selected drive to the GPT partition table.

"convert mbr". This will convert the currently selected drive to the MBR partition table.

"list disk". This will show all the disks in the system. If you have a disk selected using the select disk command, the currently selected disk will have an asterisk to the left

of it.

"clean". This command will remove all data, partitions and signatures on the drive. Effectively restoring the drive back to factory defaults. This command does not give any warning messages so be careful you have the right drive selected before you run it.

See http://YouTube.com/ITFreeTraining or http://itfreetraining.com for our always free training videos. This is only one video from the many free courses available on YouTube.

References
"Installing and Configuring Windows Server 2012 Exam Ref 70-410" pg 42-43