8.1.3 Viewing MBR Partitions

Click one of the buttons to take you to that part of the video.

View MBR Partitions 0:00-0:41

In this demonstration, I'm going to show you how to generate a quick listing of the MBR partitions that may reside on a hard disc drive.

In this Linux system, I have two hard disks installed, sda and sdb. sda uses LVM, which we'll talk about later in the course in order to create storage volumes, but my second hard disk drive in the system, sdb, has several MBR partitions defined on it, and you can view those partitions using the fdisk utility.

But before we can do that I do need to switch to my root user account because only root has the privileges necessary to run fdisk.

fdisk -1 0:42-1:32

Normally, if I wanted to use fdisk to manage /dev/sdb, I would enter 'fdisk /dev/sdb'. However, in this situation I don't want to manage SDB, I just want to look at it.

What I can do is just add a '-l' parameter to the fdisk command, and that will cause fdisk to go and look at the hard disk drive we specify, generate a listing of the partitions on it, and then exit out instead of going into full interactive mode.

Press Enter and here you can see information about sdb. It's a 20 GB hard disk drive. Here is the total number of bytes. Here is the total number of sectors. Down here it tells us how many bytes are in each sector. Each sector has 512 bytes, and down here is a listing of all the MBR partitions that have been defined on this hard disk drive.

Standard Partition 1:33-2:08

We have /dev/sdb1, which is a standard Linux partition. It starts at sector 2048. It ends at sector 20973567. This is the total number of sectors, which if you multiply this by 512 bytes, you come up with 10 GB in size.

Here is the type of partition that it is. It's a standard Linux partition--type 83--and we know from this that this is a standard primary partition. We can put a file system on it, and we can mount it in the file system and store data on it.

We also have a second partition to find.

Extended Partition 2:09-3:47

This is /dev/sdb2. It starts at the next available sector. Notice that this sector ended on 20973567, so this one starts at 20973568, the very next sector, and it goes to the end of the hard disk drive. This is a 20 GB drive, so then obviously, doing the math, it comes out to be about 10 GB in size, but notice that its type is very different. Instead of being a standard Linux partition--type 83--it is a type 5, indicating that it's an extended partition.

Extended partitions are commonly used with the MBR partitioning scheme in order to get around the four partition limit imposed by MBR. There are many times when you need way more than four partitions, especially on a Linux system. If we define an extended partition, we can then create multiple, logical partitions within that extended partition, getting us around the four partition limit.

And that's what we've done here. Within this extended partition, we've defined two logical partitions. Each one is 5 GB in size.

Any time you are looking at the device file or an MBR partition, and the number is greater than 4, you automatically know that that is a logical partition. In this case, we have /dev/sdb5 and /dev/sdb6. Because 5 and 6 are greater than 4, those have to be logical partitions.

And here you can see the start and ending sectors, 5 GB in size, and they are type 83 partitions. And because they are type 83 partitions, we can create file systems on these logical partitions, and then we can mount them in the file system.

Summary 3:48-3:53

That's it for this demonstration. In this demonstration we looked at how you can use the fdisk utility to generate a list of MBR partitions on a hard disk drive.