8.2.3 GUID Partition Management Facts

The Globally Unique Identifier Partition Table (GPT) scheme has been introduced as a replacement for the Master Boot Record (MBR) partitioning scheme.

This lesson covers the following topics:

- GPT advatages
- GPT management tools

GPT Advantages

GPT has several advantages over using MBR. GPT:

- Uses only one type of partition. There are no primary, extended, or logical partitions.
- Supports extremely large storage devices and partitions.
- Allows up to 128 partitions on a storage device.
- Stores a copy of the partition table in the first and last sectors of the storage device. If one copy gets corrupted, then the redundant copy can be used instead.
- Verifies the integrity of the partition table using a cyclic redundancy check (CRC).
- Assigns unique IDs to each storage device and partition.

GPT Management Tools

The following utilities can be used to manage GPT partitions.

Command	Function	Examples
gdisk	**gdisk**: ▪ Creates and delete GPT partitions. ▪ Displays information about a partition. ▪ Changes the name and type of a partition. ▪ Verifies a hard disk. ▪ Backs up and restores a disk's partition table. ▪ Converts an MBR partition table to a GPT partition table. The syntax for using gdisk is **gdisk *device_name***. The following options can be used within gdisk: ▪ **?** displays the help screen. ▪ **b** backs up GPT information to a file. ▪ **c** changes a partition's name. ▪ **d** deletes a partition. ▪ **i** displays detailed partition information. ▪ **l** lists partition type codes. ▪ **n** adds a new partition. ▪ **o** creates a new GUID partition table. ▪ **p** prints the partition table. ▪ **q** quits **gdisk** without saving changes. ▪ **s** sorts the list of partitions. ▪ **t** changes a partition's type code. ▪ **v** verifies a storage device. ▪ **w** writes changes to the partition table of the storage device and exits **gdisk**.	**gdisk /dev/sdc** opens gdisk and edits the partition table on the third storage device in the system.
parted	**parted**: ▪ Creates and delete GPT partitions. ▪ Modifies GPT partitions. The **parted** command writes partition changes to disk immediately. Carefully plan any partition changes to be made before using **parted**. The syntax is to run **parted** at the shell prompt. The following commands can be used within **parted**: ▪ **select *device_name*** identifies which storage device to edit.	**parted** starts the parted utility.

- **mkpart *partition_type start_point end_point*** creates a new partition. For example:
  - To create a standard Linux partition, specify a partition type of **Linux**.
  - To create a partition that starts at 1 GB and ends at 21 GB, specify a start point of 1024 and an end point of 21504.
- **print** displays a list of partitions on the device.
- **name *partition_name*** renames a partition.
- **move *partition start_point end_point*** moves a partition to a different location on the storage device.
- **resize *partition start_point end_point*** resizes a partition.
- **rm *partition*** deletes a partition.