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.	**gdisk /dev/sdc** opens gdisk and edits the partition table on the third storage device in the system.

	• **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**.	

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.
	• **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.
		parted starts the parted utility.