DPM provides facilities to define and run virtualized computing systems by using a firmware-managed environment that coordinate the physical system resources that are shared by the partitions. The partitions' resources include processors, memory, network, storage, crypto, and accelerators.

DPM provides a new mode of operation for IBM Z servers that provide the following services:

- Facilitates defining, configuring, and operating PR/SM LPARs in a similar way to how someone performs these tasks on another platform.
- Lays the foundation for a general IBM Z new user experience.

DPM is not another hypervisor for IBM Z servers. DPM uses the PR/SM hypervisor infrastructure and provides an intelligent interface on top of it that allows customers to define, use, and operate the platform virtualization without IBM Z experience or skills.

3.7.2 Storage operations

In z15 servers, memory can be assigned as main storage, supporting up to 85 LPARs. Before you activate an LPAR, main storage must be defined to the LPAR. All installed storage can be configured as main storage. Each z/OS individual LPAR can be defined with a maximum of 4 TB of main storage. z/VM V6R4 and z/VM V7R1 support 2 TB of main storage.

Memory *cannot* be shared between system images (LPARs). It is possible to dynamically reallocate storage resources for z/Architecture LPARs that run operating systems that support dynamic storage reconfiguration (DSR). This process is supported by z/OS, and z/VM. z/VM, in turn, virtualizes this support to its guests. For more information, see 3.7.5, "LPAR dynamic storage reconfiguration" on page 142.

Operating systems that run as guests of z/VM can use the z/VM capability of implementing virtual memory to guest virtual machines. The z/VM dedicated real storage can be shared between guest operating systems.

The z15 storage allocation and usage possibilities, depending on the image mode, are listed in Table 3-8.

Table 3-8 Main storage definition

Image mode	Architecture mode (addressability)	Maximum main storage	
		Architecture	z15 definition
General	z/Architecture (64-bit)	16 EB	4 TB
Coupling facility	CFCC (64-bit)	1.5 TB	1 TB
Linux only	z/Architecture (64-bit)	16 EB	16 TB
z/VM[a]	z/Architecture (64-bit)	16 EB	2 TB
SSC[b]	z/Architecture (64-bit)	16 EB	16 TB

a. z/VM mode is supported by z/VM V6R4 and later.
b. Secure Service Container