



advanced management module (AMM). A hardware unit that provides system-management functions for all the blade servers in a BladeCenter chassis.

alternate HMC. A System z Hardware Management Console (HMC) that is paired with the primary HMC to provide redundancy.

appliance. A software device that provides a narrow range of functions and generally runs on a hardware platform

application environment. The environment that includes the software and the server or network infrastructure that supports it.

ARM-instrumented application. An application in which application response measurement (ARM) calls are added to the source code to enable the performance of the application to be monitored by management systems. ARM is an Open Group standard.

Automate suite (Automate). The second of two suites of functionality associated with the IBM zEnterprise Unified Resource Manager (zManager). The Automate suite includes goal-oriented monitoring and management of resources and energy management.

blade. A hardware unit that provides application-specific services and components. The consistent size and shape (or form factor) of each blade allows it to fit in a BladeCenter chassis.

BladeCenter chassis. A modular chassis that can contain multiple blades, allowing the individual blades to share resources such as the management, switch, power, and blower modules.

central processor complex (CPC). A physical collection of hardware that consists of main storage, one or more central processors, timers, and channels. In the zEnterprise environment, the CPC consists of a System z zEnterprise mainframe and any attached IBM zEnterprise BladeCenter Extension (zBX).

classification rule. A rule used by System z workload manager firmware and software to assign a service class.

discretionary goal. A service class performance goal assigned to low priority work that does not have any specific performance goal. Work is run when system resources are available.

ensemble. A collection of one or more zEnterprise nodes (including any attached zBX) that are managed as a single logical virtualized system by the zManager, through the use of a Hardware Management Console.

ensemble member. A zEnterprise node that has been added to an ensemble.

firmware. Licensed Internal Code (LIC) that is shipped with hardware. Firmware is considered an integral part of the system and is loaded and run at power on. Firmware is not open for customer configuration and is expected to run without any customer setup.

guest platform management provider (GPMP). An optional suite of applications that is installed in specific z/OS, Linux, and AIX operating system images to support platform management functions. For example, the guest platform management provider collects and aggregates performance data for virtual servers and workloads.

Hardware Management Console (HMC). A user interface through which data center personnel configure, control, monitor, and manage System z hardware and software resources. The HMC communicates with each central processor complex (CPC) through the Support Element (SE). On an IBM zEnterprise 196 (z196), using the zManager on the HMCs/SEs, personnel can also create and manage an ensemble.

hypervisor. A program that allows multiple instances of operating systems or virtual servers to run simultaneously on the same hardware device. A hypervisor can run directly on the hardware, can run within an operating system, or can be imbedded in platform firmware. Examples of hypervisors include PR/SM, z/VM, and PowerVM Enterprise Edition.

IBM Smart Analytics Optimizer for DB2 for z/OS. An optimizer that processes certain types of data warehouse queries for DB2 for z/OS.

IBM System z Application Assist Processor (zAAP). A specialized processor that provides a Java execution environment, which enables Java-based web applications to be integrated with core z/OS business applications and backend database systems.

IBM System z Integrated Information Processor (zIIP). A specialized processor that provides computing capacity for selected data and transaction processing workloads, and for selected network encryption workloads.

IBM zEnterprise 196 (z196). The newest generation of the System z family of servers built on a new processor chip, with enhanced memory function and capacity, security, and on demand enhancements to support existing mainframe workloads and large scale consolidation.

IBM zEnterprise BladeCenter Extension (zBX). A heterogeneous hardware infrastructure that consists of a BladeCenter chassis attached to a IBM zEnterprise 196 (z196). A BladeCenter chassis can contain POWER blades or optimizers.

IBM zEnterprise System (zEnterprise). A heterogeneous hardware infrastructure that can consist of a IBM zEnterprise 196 (z196) and an attached IBM zEnterprise BladeCenter Extension (zBX) Model 002, managed as a single logical virtualized system by the zManager.

IBM zEnterprise Unified Resource Manager (zManager). Licensed Internal Code (LIC), also known as firmware, that is part of the Hardware Management Console. The zManager provides energy monitoring and management, goal-oriented policy management, increased security, virtual networking, and data management for the physical and logical resources of a given ensemble.

intraensemble data network (IEDN). A private high-speed network for application data communications within an ensemble. Data communications for workloads can flow over the IEDN within and between nodes of an ensemble. All of the physical and logical resources of the IEDN are configured, provisioned, and managed by the zManager.

intraensemble data network (IEDN) TOR switch. A top-of-rack switch that provides connectivity to the intraensemble data network (IEDN), supporting application data within an ensemble.

intranode management network (INMN). A private service network that the zManager uses to manage the resources within a single zEnterprise node. The INMN connects the Support Element (SE) to the IBM zEnterprise 196 (z196) and to any attached IBM zEnterprise BladeCenter Extension (zBX).

Manage suite (Manage). The first suite of functionality associated with the IBM zEnterprise Unified Resource Manager (zManager). The Manage suite includes core operational controls, installation, and configuration management, and energy monitoring.

management TOR switch. A top-of-rack switch that provides a private network connection between a IBM zEnterprise 196 (z196) Support Element (SE) and a IBM zEnterprise BladeCenter Extension (zBX).

network interface card (NIC). A printed circuit board that plugs into a server. It controls the exchange of data over a network and provides the electronic functions for the data link protocol or access method, such as token ring or Ethernet.

node. A single IBM zEnterprise 196 (z196) and any optionally attached IBM zEnterprise BladeCenter Extension (zBX). A node can be a member of only one ensemble. See also central processor complex.

zEnterprise =
(the new z196 mainframe) +
(the new z BladeCenter eXtension) +
(new firmware)

optimizer. A special-purpose hardware component or appliance that can perform a limited set of specific functions, with optimized performance when compared to a general-purpose processor. Because of its limited set of functions, an optimizer is an integrated part of a processing environment, rather than a standalone unit. One example of an optimizer is the IBM Smart Analytics Optimizer for DB2 for z/OS.

OSA-Express3. Features that provide improved performance by reducing latency at the TCP/IP application. Direct access to the memory allows packets to flow directly from the memory to the LAN without firmware intervention in the adapter.

OSM. An OSA-Express3 channel path identifier (CHPID) type that provides connectivity to the intranode management network (INMN).

OSX. An OSA-Express3 channel path identifier (CHPID) type that provides connectivity to the intraensemble data network (IEDN).

performance index. A number that indicates whether the performance goal for a service class was achieved, exceeded, or missed.

performance policy. A description of the performance objectives and importance of a workload.

platform management. The subset of systems management focused on hardware and virtualization management.

PowerVM Enterprise Edition (PowerVM). A hypervisor that provides a set of comprehensive systems technologies and services designed to enable aggregation and management of POWER blade resources through a consolidated, logical view.

primary HMC. The System z Hardware Management Console (HMC) through which data personnel create and manage an ensemble. This HMC owns configuration and policy information that the zManager uses to monitor, manage, and adjust resources for all members of this ensemble.

power system control network (PSCN). The power subsystem of the System z servers that is controlled by a fully redundant dual-Ethernet communications network. This network provides communication to all field-replaceable units (FRUs) and hierarchic control through a mirrored system of control cards and IP addresses. The PSCN provides a means for subsystems to communicate and control the dynamic parameters of system operation. The PSCN also supports error reporting, failure data collection and recovery detection, and correction of both the internal hardware and firmware of the System z servers.

rack. A free-standing structure or frame that can hold multiple servers and expansion units, such as BladeCenter blades.

response time goal. A service class performance goal that defines end-to-end response time of work requests.

service class. A group of work that has the same service goals or performance objectives, resource requirements, or availability requirements.

static power save mode. A IBM zEnterprise 196 (z196) function used for periods of low utilization or potentially when a CPU system is sitting idle waiting to take over in the event of a failure. The server uses frequency and voltage reduction to reduce energy consumption of the system. Static power save mode is initiated by the customer using the HMC/SE or Active Energy Manager.

system activity display (SAD). Internal panel that displays actual power consumption of the system.

top-of-rack (TOR) switch. A network switch that is located in first rack of an IBM zEnterprise BladeCenter Extension (zBX).

transaction. A unit of processing consisting of one or more application programs, affecting one or more objects, that is initiated by a single request.

velocity goal. A service class performance goal that defines the acceptable amount of delay for work when work is ready to run. Velocity is the measure of how fast work should run when ready, without being delayed by contention for managed resources.

virtual appliance. A prepackaged software application that provides some well-defined business workflow, making it easier to deploy a solution with minimal configuration. Many tiers of operating system and applications can be packaged as a single virtual appliance. These tiers can depend on the hardware resources of different architectures.

virtual server. A logical construct that appears to comprise processor, memory, and I/O resources conforming to a particular architecture. A virtual server can support an operating system, associated middleware, and applications. A hypervisor creates and manages virtual servers.

virtual server collection. A set of virtual servers that are involved in supporting a workload. This set is not necessarily static. The constituents of the collection at any given point are determined by the virtual servers involved in supporting the workload at that time.

virtual server image. A package containing metadata that describes the system requirements, virtual disks, and any goals and constraints for the virtual machine (for example, isolation and availability). The Open Virtual Machine Format (OVF) is a Distributed Management Task Force (DMTF) standard that describes a packaging format for virtual server images.

virtual server image capture. The ability to store metadata and disk images of an existing virtual server.

The metadata describes the virtual server's storage, network needs, goals, and constraints. The captured information is stored as a virtual server image that can be referenced and used to create and deploy other similar images.

virtual server image clone. The ability to create an identical copy (clone) of a virtual server image that can be used to create a new similar virtual server.

workload. A collection of virtual servers that perform a customer-defined collective purpose. A workload generally can be viewed as a multi-tiered application. Each workload is associated with a set of policies that define performance and energy consumption goals.

zCPC. The physical collection of main storage, central processors, timers, and channels within a System z zEnterprise mainframe. Although this collection of hardware resources is part of the larger zEnterprise central processor complex, you can apply energy management policies to the zCPC that are different from those that you apply to any attached IBM zEnterprise BladeCenter Extension (zBX) or blades.