**Platform Performance**

*Enterprise Workload Manager (EWLM) must be enabled.*

**DB2 Manage**

For after you have determined the application resource requirements, you start the New Virtual Server wizard and go through the panels to define the new server characteristics.

**WebSphere Application Server** products

**Guest platform management providers**

**Hypervisor.**

CPU management is supported for z/VM hypervisors running on the z196, and for PowerVM Enterprise Edition running on a POWER blade.

Before the zManager can dynamically adjust CPU resources according to goal-based policies, the IEDN, which exports the full set of ARM 4.0 interfaces as defined by the Open Group standard. Instrumented applications request CPU resources through the guest platform management provider (GPMP), which collects performance data for work running on a virtual server. The GPMP passes the data to the ensemble HMC, where you can view the data in various reports.

- **New Workload Wizard** is an HMC guide that steps you through the process of defining a workload, creating performance policies, and classifying and activating one policy.

The New Workload Wizard is particularly useful when you are first setting up an ensemble and its elements, including policy definitions.

- It also provides a consolidated overview of the workload-related tasks that you can perform separately, during normal ensemble runtime.

**Two panels in the New Virtual Server wizard are key to performance management:**

- **On the Assign Processors panel,** you need to specify whether your new virtual server is to share or have exclusive use of processors.

- **On the Performance Management panel,** you select Enabled to allow the zManager to manage CPU resources for this new virtual server.

To determine whether you need to adjust the default values that are assigned to a virtual server on a POWER blade, you need to consider the following factors:

- The initial processing capacity required by the applications that are to run on this virtual server.
- The effect of running the virtual server at the minimum rather than the initial capacity value. Note: For zVM, the zManager and the z/VSE Resource Manager (VMRM) can manage CPU resources among z/VSE virtual servers, but only one can perform this function at a time.

Creating and managing workloads

**Administration/operation tasks accomplished through ensemble-management HMC.**

- **Edit workload context**
- **List workload contexts and associated policies**
- **Delete workload context**
- **View virtual server property**
- **Manage CPU management in an ensemble,** the IBM zEnterprise Unified Resource Manager (zManager) uses goal-oriented policies to manage CPU resources that are allotted to virtual servers in the ensemble.
- **Resources can be adjusted only among virtual servers that run under the same hypervisor.**
- **CPU management is supported for z/VSE hypervisors running on the z196, and for PowerVM Enterprise Edition hypervisors running on a POWER blade.**

**Note:** Before the zManager can dynamically adjust CPU resources according to goal-based policies, CPU management must be enabled for both the hypervisor type and for individual virtual servers.

**When you first create an ensemble,** the initial setting for CPU management for hypervisor types is Disabled.

- **If you decide to enable CPU management in the ensemble for a hypervisor type, you need to make some configuration changes to the z/VSE or PowerVM hypervisor before doing so.**
- **When you first create a virtual server,** the initial setting for CPU management is Enabled; however, the zManager does not manage CPU allocations unless CPU management is also enabled for that hypervisor.

**Prerequisites for using performance management**

- The performance management functions that are available for use in a zEnterprise environment depend on the suite associated with the zManager (MANAGE or AUTOMATIC).
- The basic Managed suite provides limited performance management functions.
- All virtual servers in the zEnterprise and IBM zEnterprise BladeCenter Extension (zBX) are automatically associated with default workload and performance policy.
- Through the Monitors Dashboard in the HMC, you can display CPU and I/O activity.
- The Automatic suite provides the high-level management functions that enable you to create your own custom workloads and performance policies.
- With the Automatic suite, you are able to manage workloads by:
  - Defining a workload and associating specific virtual servers with that custom workload.
  - Creating performance policies for each custom workload.
  - Monitoring and displaying performance data for each workload.
  - Managing platform resources used to support each workload.
  - Viewing overall workload performance health from a platform perspective.
  - Determining whether goals defined in the workload performance policy are being achieved.
  - Drilling down to identify which virtual servers are contributing to performance problems.

**Note:** Also with the Automatic suite, your custom workloads can benefit from dynamic adjustments to CPU resources to ensure that multiterm applications are provided sufficient resources, and adhere to service level agreements.

**Performance management functions provided through either the Manage or Automatic suite do not apply for the following:**

- Multiple LPARs running on the same POWER blade.
- Multiple instances running on different power processors. (Use `GPMP` for z/VSE)

**Elements of a workload management policy**

- **Importance (Highest, High, Medium, Low, Lowest)**
- **Describe the connection between Workload level importance, and service class level importance.**

**The New Workload Wizard** is an HMC tool that guides you through the process of defining a new workload and creating performance policies.

- **The New Workload Wizard** is particularly useful when you are first setting up an ensemble and its elements, including policy definitions.

- It also provides a consolidated overview of the workload-related tasks that you can perform separately, during normal ensemble runtime.

**As an example, for pSeries with after you have determined the application resource requirements, you start the New Virtual Server wizard and go through the panels to define the new server characteristics.**

**Two panels in the New Virtual Server wizard are key to performance management:**

- **On the Assign Processors panel,** you need to specify whether your new virtual server is to share or have exclusive use of processors.

- **On the Performance Management panel,** you select Enabled to allow the zManager to manage CPU resources for this new virtual server.