



IBM Software

IBM Software Sub Capacity Licensing Overview

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IBM Software Licensing for Virtual Environments

When based on capacity, there are two ways to license IBM software

- **Full capacity licensing – License all cores on the server.** Customers acquire Processor Value Unit (PVU) licenses based on the physical core capacity of the server where the IBM program is installed (all processor cores x PVUs per core)
- **Sub-capacity licensing for virtualized systems – License fewer than all cores on the server when compliant with Sub-capacity terms.** Customers acquire PVU licenses based on the virtual core capacity of a partition or VM available to the IBM program, not to exceed the physical core capacity of the server.

Reference both the [PVU Licensing](#) and the [Virtualization \(Sub-capacity\) Licensing](#) web pages for terms on full capacity and sub-capacity licensing.

IBM Software Licensing for Virtual Environments

What is the benefit of Sub Capacity Licensing?

■ **Potential Software Savings - Pricing**

- ▶ Sub-capacity licensing lets you license an eligible software product for less than the full capacity of your server or group of servers.
 - It provides the licensing granularity needed to leverage various multi-core chip and virtualization technologies.
 - Deploy on large multi core machines but only license to available cores

■ **Flexibility**

- ▶ License requirements can be based on virtual machines and available cores
 - Physical machines can be changed (consolidation) without increasing license needs if cores available in virtual machine remain the same

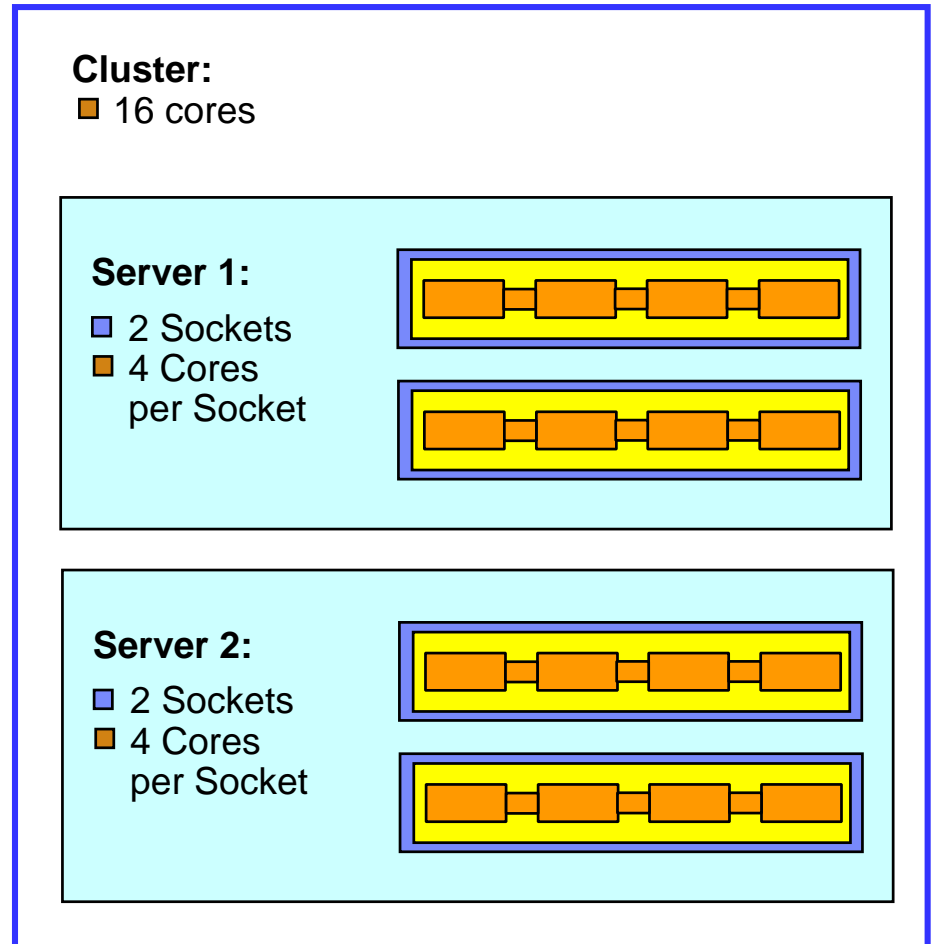


Defining the Physical Environment

- **Processor core** – a single computing unit, referred to by some vendors as a processor or CPU.
- **Chip*** – microprocessor containing one or more processor cores, e.g. single core or multi-core.
- **Socket*** – slot in the server that holds and provides mechanical and electrical connections to the chip.
- **Server** – a physical machine that provides resources, i.e. processor core capacity.
- **Cluster** – a group of servers linked together to share resources and operate as a single machine.

*Chip & Socket are often use interchangeably.

Physical Environment:

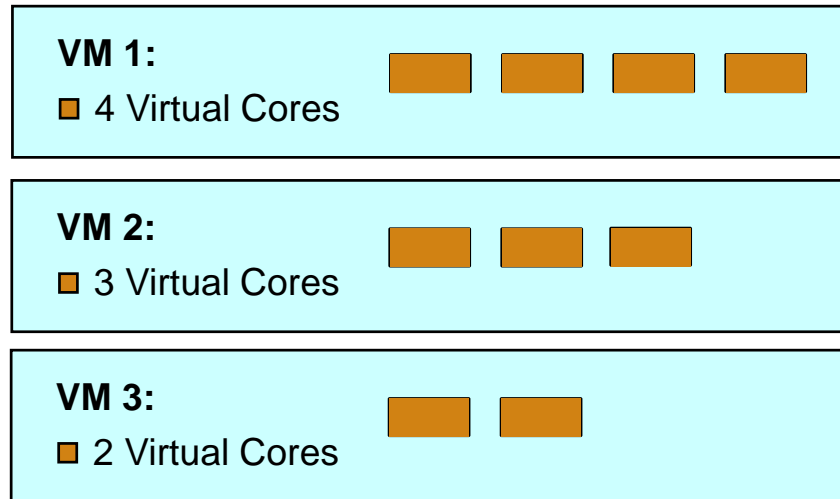


Defining the Virtual Environment

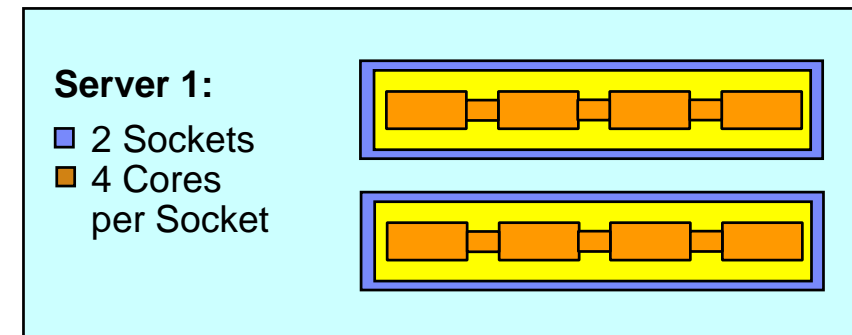
The computing resources of the virtual environment comes from the physical environment. Although VM or Virtual Core quantities may be lower or higher than quantities of servers or physical cores, the total processing capacity is equal.

- **VM (Virtual Machine) or Partition** – a software implementation of a physical machine or server.
- **Virtual Core** – each VM is assigned a virtual core quantity. Each virtual core is equal to one core for PVU licensing.
- **Physical Server (Host Server)** – a physical machine that provides the computing resources to the virtual environment.

Virtual Environment (9 cores):



Physical Environment (8 cores):



Sub-capacity Licensing Requirements

- Customers must comply with the Sub-capacity Licensing terms as stated in the ([July 2014 IBM Passport Advantage Agreement \(IPAA\)](#))*. Customers have 90 days to comply.
 1. License an Eligible Sub-capacity Product (primarily PVU offerings)
 2. Use an Eligible Virtualization Technology
 3. Use an Eligible Processor
 4. Install the IBM License Metric Tool (free of charge) unless
 - the enterprise has fewer than 1,000 employees and contractors
 - the total physical capacity of the Environment, measured on a Full Capacity basis, but licensed using sub-capacity terms is less than 1,000 PVUs.
 - Two versions of ILMT are available, version 7.5 and version 9.0 as highlighted at <http://www.ibm.com/software/passportadvantage/ibmlicensemetrictool.html>

- Reference the [Virtualization \(Sub-capacity\) Licensing](#) web page for Eligibility Tables.
- For more information on sub-capacity requirements follow the link below:
http://public.dhe.ibm.com/software/passportadvantage/SubCapacity/Sub_capacity_Licensing_Overview_for_customers.pdf

* Reference a current version of IPAA for any changes.

IBM License Metric Tool (ILMT)

- The use of ILMT is recommended for full capacity environments and mandatory for sub-capacity environments
- ILMT is free of charge for PPA Customers
- ILMT must be installed according to instructions provided on ILMT Knowledge Center https://www-01.ibm.com/support/knowledgecenter/SS8JFY/lmt_welcome.html
- Customers have 90 days from first eligible Virtualization (Sub)-capacity product deployment to install and begin using ILMT for supported virtualization technologies.
- ILMT agents must be installed on every partition with Eligible Products licensed under sub-capacity terms
 - ▶ The agents will send information about installed IBM software to the ILMT server
- Exceptions may include:
 - ▶ When ILMT does not yet provide support for the Eligible Virtualization Environment
 - ▶ If your enterprise has fewer than 1000 employees and contractors worldwide, you are not a service provider, and you have not contracted with a service provider to manage your Eligible Virtualization Environment
 - ▶ If your enterprise's total physical capacity of your servers with an Eligible Virtualization Environment, measured on a full capacity basis but licensed under sub-capacity terms, is less than 1000 PVUs
 - ▶ For the above exceptions, customers must manually manage, track and prepare a [Manual Calculation of Virtualization Capacity worksheet](#)