



Processor Licensing Policy

(Effective December 1, 2011)

Certain Products are licensed by the Unit type "Processor." This document describes how to calculate the number of Processor Units which should be licensed in a Virtualized Environment and in all other environments.

Any capitalized terms used in this document and not otherwise defined are defined at <https://www.cloud.com/content/dam/cloud/documents/legal/business-unit-terms.pdf>.

Calculation

The number of Processor Units of a Product required to be licensed shall be calculated as follows:

1. In a Virtualized Environment, the number of **Virtual Processors** shall be calculated by following the steps below:
 - i. For each Virtual Machine running the Product, the number of Virtual Processors shall be counted in increments of whole numbers. For clarification, the lowest unit of measurement for Virtual Processors is one; any fraction shall be rounded upward to the next whole number.
 - ii. If the number of Virtual Processors of a Virtual Machine can increase or decrease, then for the purpose of counting Virtual Processors, the number of Virtual Processors shall be the maximum whole number of Virtual Processors that could ever be assigned to the Virtual Machine running the Product.
 - iii. Add the total number of Virtual Processors across all Virtual Machines within the entire Virtualized Environment that runs the Product.
2. In all other environments (e.g. running on physical machine(s) or if a Virtual Processor can run on more than one Physical Processor at a time), the number of **Physical Processors** shall be calculated by following the steps below:
 - i. For each Product, the relevant partition boundary shall be set:
 - (a) where the allocation is defined by Fixed Partitioning, to include all Physical Processors that could ever execute the Product.
 - (b) where the allocation is *not* defined by Fixed Partitioning, to include all Physical Processors *on the physical machine*.
 - ii. Count the total number of Physical Processors for the relevant partition boundary for each physical machine, and aggregate the counts across all physical machines within the entire environment that runs the Product.
3. For all environments, if multi-threading is enabled for the underlying physical cores, then the total count of Physical Processors or Virtual Processors, as the case may be, shall be multiplied by 0.5.
 - i. If the multi-threading function is disabled, then a multi-threaded core shall be treated as a single-threaded core, in which case,
 - (a) when calculating the number of Processors in a Virtualized Environment, the 0.5 multiplier shall be inapplicable; and
 - (b) when calculating the number of Processors in all other environments, the number of cores instead of threads shall be the number of Processors Units required to be licensed and the 0.5 multiplier shall be inapplicable.
4. Any fraction shall be rounded upward to the next whole number.

The above calculation yields the total number of Processor Units required to be licensed for the Products.