z/VM Software Licensing Overview

z/VM and most z/VM systems management software programs are z Systems IPLA products whose licensing is based upon the number of Engines (also sometimes referred to as Processors). The Value Unit Exhibit for z/VM is VUE021.

z/VM is able to run on z Systems general purpose processors (often called Central Processor engines or CPs). z/VM is also allowed to run on Integrated Facility for Linux engines (often called IFLs) but only when running Linux or Open Solaris workloads. When counting the number of engines which must be licensed the two different types of engines, CPs and IFLs, are counted independently.

z/VM and the z/VM systems management software programs using VUE021 are eligible for z/VM Sub-Capacity Pricing, for more information see the Sub-Capacity for z/VM web page.

The IPLA licensing rules for Full Capacity products using VUE021 are as follows:
- If the product is used on any CPs on a machine, it must be licensed on all the CPs on that machine.
- If the product is used on any IFLs on a machine, it must be licensed on all the IFLs on that machine. IFL use is limited to Linux or OpenSolaris workloads only.
- If the product is used only on CPs you do not count the number of IFLs.
- If the product is used only on IFLs you do not count the number of CPs.

The reference above to product also refers to each z/VM feature, e.g. the z/VM base feature as well as each optional priced feature (such as RACF).

The "use of product" boundary is by machine, so a customer using a VUE021 product or feature on Machine A and not on Machine B does not count any of the engines on Machine B.

When referring above to "all" of the CPs or IFLs on a machine, engines which are "assigned" (activated for use) are counted, whether or not all of them are currently being used. Purchased but Unassigned engines (sometimes called "banked" engines) are physically unavailable to be used and therefore are not counted.

Licensing Examples

Full Capacity Example 1
Customer has a 2828-R03 with 3 CPs and 7 IFLs
- z/OS running on 2 CPs
- z/VM Base and RSCS running on 1 CP
- z/VM Base, DirMaint, and RACF running on 7 IFLs

The total Engines and required Value Units for each z/VM feature are:

Product	CP and IFL Engines	Total Engines	Required VUs
Base	3 CPs + 7 IFLs	10 Engines	88 VUs
RSCS	3 CPs	3 Engines	30 VUs
DirMaint	7 IFLs	7 Engines	65 VUs
RACF	7 IFLs	7 Engines	65 VUs

Full Capacity Example 2
Customer has 2 machines running the following software:
- A. 2827-709 with 9 CPs and 14 IFLs
    - o   z/OS running on all 9 CPs
    - o   z/VM Base and RACF running on 10 IFLs
    - o   Linux running native on 4 IFLs
- B. 2827-725 with 21 CPs and 11 IFLs
    - o   z/OS running on all 21 CPs
    - o   z/VM Base and Dirmaint running on 8 IFLs
    - o   Linux running native on 2 IFLs

The total Engines and required Value Units (VUE021) for each z/VM feature are:

Product	Machine A	Machine B	Total Engines	Required VUs
Base	14 IFLs	11 IFLs	25 Engines	166 VUs
RACF	14 IFLs		14 Engines	114 VUs
Dirmaint		11 IFLs	11 Engines	95 VUs

Linux on z Systems Middleware

Middleware programs running on Linux itself are licensed through Passport Advantage which has different licensing rules from z Systems software programs. For more information see the Linux on z Systems Middleware Software Licensing Overview.