



IBM Passport Advantage Software

Sub-capacity (Virtualization) License Counting Rules

Processor Deconfiguration and TurboCore on IBM Power Systems servers to Limit Processor Cores Available

NOTE: Please use these rules in conjunction with the Passport Advantage Agreement

<http://www-01.ibm.com/software/lotus/passportadvantage/agreementsandforms.html>

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Summary of Virtualization Capacity Licensing Requirements

- Customers must:
 - ▶ Agree to the terms of the Sub-capacity Attachment, and follow Virtualization Capacity License Counting rules for their Eligible Virtualization Environment(s)
 - ▶ Use Eligible Sub-capacity Products
 - ▶ Use Eligible Virtualization Technologies
 - ▶ Use Eligible Processor Technologies
 - ▶ Use the IBM License Metric Tool (ILMT) and maintain report documentation
 - Tivoli Asset Discovery for Distributed (TADd) or IBM BigFix Inventory, may be used in lieu of IBM License Metric Tool
 - Certain ILMT / TADd / BigFix use exceptions may apply

PLEASE NOTE:

■ *The above is only a summary. For details about sub-capacity licensing requirements, see the Sub-capacity Attachment and other information referred to above, at [Passport Advantage Virtualization Capacity website](http://www-01.ibm.com/software/lotus/passportadvantage/subcaplicensing.html)*

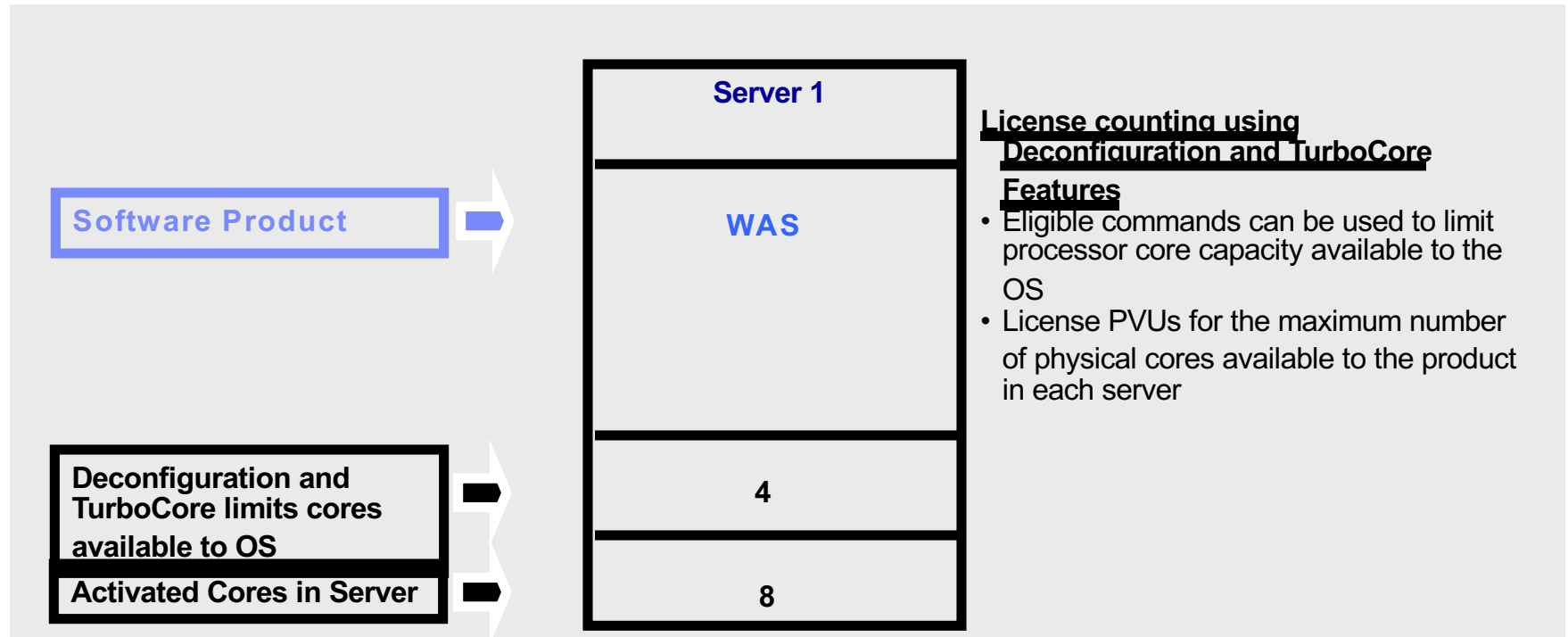
<http://www-01.ibm.com/software/lotus/passportadvantage/subcaplicensing.html>

■ *Customers are responsible for the installation of the IBM License Metric Tool and for the server it runs on.*

Deconfiguration and TurboCore for Power Systems Servers - Definitions

- **Processor Deconfiguration** – Feature allowing to take some of the processor cores offline.
- **TurboCore** - In standard or MaxCore mode, the Power system uses all processor cores and has access to the entire L3 cache. In TurboCore mode, only a fraction of the cores are available but at a higher frequency and these cores have access to the entire L3 cache. Thus, in Turbo-core mode there are fewer cores running at a higher frequency with a higher core-to-L3-cache ratio. TurboCore is limited to selected Power7 servers.

License counting for a Power Systems Server using Processor Deconfiguration or TurboCore to limit processor core capacity available



▶ For above example, the PVU Virtualization Capacity licensing requirement is based on the maximum number of physical cores available to a product in each server

Cores to License	Server 1	Virtualization Capacity	Full Capacity
WAS	4	4	8

Processor Deconfiguration or TurboCore for Power Systems Servers - Licensing Rules

The PVU Virtualization Capacity licensing requirement is based on the maximum number of physical cores available to a product in each server

- The licensing rules in the preceding pages reflect how ILMT will operate to calculate PVUs
- If ILMT does not yet support a Eligible Virtualization Environment, or you qualify for an exception to use ILMT, you will need to follow the Manual Calculation of Virtualization Capacity.
- The Manual Calculation of Virtualization Capacity rules can be found in the following pages
- To find out if a Eligible Virtualization Technology is supported by ILMT visit [Passport Advantage Sub-capacity licensing information](http://www-01.ibm.com/software/lotus/passportadvantage/subcaplicensing.html)
<http://www-01.ibm.com/software/lotus/passportadvantage/subcaplicensing.html>

Manual Calculation of Virtualization Capacity

- **Eligibility Criteria:** Customers must use the IBM License Metric Tool, with the following exceptions
 - ▶ ILMT does not support the Eligible Virtualization Environment
 - ▶ Customer has fewer than 1000 employees and contractors and Customer server Full Capacity licensing for a PVU product is less than 1000 PVUs (on servers with an Eligible Virtualization Environment) - **Tool recommended**
- **Requirements:** For the above exceptions, customers must manually manage, track and prepare Audit Reports
 - ▶ An Audit Report must be prepared at least once per quarter and identify the following detail: Each Eligible Sub-Capacity Product deployed in each Eligible Virtualization Environment
 - ▶ An Eligible Virtualization Environment can be a Single Server or a Group of Servers (Server Cluster)
 - ▶ In addition to the above detail, the report should provide a summary total of the required number of PVUs by and for each Eligible Sub-Capacity Product
 - ▶ Audit Reports must be prepared as frequently as is required to maintain a history of increases to Virtualization Capacity and Full Capacity
 - ▶ Each Audit Report must be **generated**, at least once per quarter

The above is only a summary. For detailed terms please see the [Passport Advantage Sub-capacity licensing information](http://www-01.ibm.com/software/lotus/passportadvantage/agreementsandforms.html) (<http://www-01.ibm.com/software/lotus/passportadvantage/agreementsandforms.html>)

Manual Calculation of Virtualization Capacity – Rules

The PVU Virtualization Capacity licensing requirement is based on the maximum number of physical cores available to a product in each server

Manual Calculation of Virtualization Capacity - Worksheet Example

Use the following tabs

- Instructions & Information
- Single Server

Web Link:

http://public.dhe.ibm.com/software/passportadvantage/SubCapacity/Manual_Calculation_of_Virtualization_Capacity_Apr_2012.xls

VIRTUALIZATION ENVIRONMENT - SINGLE SERVER			
- This worksheet is for one standalone server for one Software Product			
- Per the Instructions on the first tab, you may choose to leverage this approach or develop / leverage your own processes and reporting format so long as you capture all the mandatory information below			
- Enter data in input fields below (shaded area)		* Mandatory	
Date of this Audit Report *	March 31, 2009		
Product Name *	IBM WEBSPPHERE APPLICATION SERVER NETWORK DEPLOYMENT		
Program Identification Number (57xx-xxx)	5724-H88		
P/N Description	IBM WEBSPPHERE APPLICATION SERVER NETWORK DEPLOYMENT PROCESSOR VALUE UNIT (PVU)		
Part Number	D55WJLL		
Server ID / Location	Server ID # F6015; Bldg 1, Room 1, Somers, NY		
Server Vendor / Brand	IBM System x		
Server Model	xxxxx		
Virtualization Technology used *	VMware ESX 3.5		
Processor Technology (Vendor, Brand,Type,Model#) * (A)	Intel Xeon Quad Core Model 35XX		
PVUs per core * (A)	70		
Total Activated Cores on Server * (C)	8		
Full Capacity PVUs for Server * (C)	560		
	DO NOT	DELETE	ROW
VM, Partition ID * (whatever identifier used for any subdivision of a server such as LPAR #, IP address, hostname, etc.)	Cores (B) per Partition or VM *	User Comments	
A	4		
B	4		
C	2		
D	2		
Sum of Virtual Cores * PVUs per core *	12 70		
Virtualization Capacity PVUs by Product for Server *	840		
PVU Licenses required by Product for Server * (C)	560		
* Mandatory Field			
(A) PVU's required for each physical processor core are listed on the PVU table (see link below, including vendor/brand designations) http://www-01.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html			
(B) For purposes of 'Manual Calculation' of Virtual Capacity, 1 virtual core (or CPU) is equivalent to 1 physical core. Enter values in whole cores.			
(C) Lower of Full Capacity or Virtualization Capacity			

Key Web Links

■ PVU

■ PVU table and other information

http://www-01.ibm.com/software/lotus/passportadvantage/pvu_licensing_for_customers.html

■ Sub-capacity

■ Passport Advantage Sub-capacity licensing information

<http://www-01.ibm.com/software/lotus/passportadvantage/subcaplicensing.html>

■ Virtualization Capacity License Counting Rules

http://www-01.ibm.com/software/lotus/passportadvantage/Counting_Software_licenses_using_specific_virtualization_technologies.html

■ Passport Advantage Agreement Terms

<http://www-01.ibm.com/software/lotus/passportadvantage/agreementsandforms.html>