Processor Value Unit Licensing for Select IBM Middleware Answers to Frequently Asked Questions July 25, 2006

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Announcement Overview

- Q1: Have all the middleware software programs using the per processor metric been migrated to the Processor Value Unit metric?
- A: No, although the majority of per processor based middleware programs have been migrated to the new metric there are a few exceptions. Some examples are:
 - 1) Some recent acquisitions have not been included at this time (i.e Ascential, Micromuse)
 - 2) Withdrawn or older legacy products may have chosen not to migrate to avoid customer disruption on non-strategic products (i.e. Red Brick)
 - 3) Products already licensed under a separate value unit methodology (i.e. DB2 Anonymous Resolution)
 - 3) Products where the licensing metric is under review or customers have recently experienced a licensing metric change (i.e. Tivoli Storage Manager)

This announcement has no impact on operating systems (e.g.AIX) or traditional mainframe software running under mainframe operating systems (e.g., z/OS, z/VM or z/VSE)."

- Q2: What resources are available to explain this new licensing structure and the migration of existing licenses to my customer?
- A: A page on Passport Advantage (on PartnerWorld for IBM Business Ppartners) has been created to help you explain the announcement to your customer. In particular, there is a customer presentation and a Processor Value Unit brochure available to explain the new Processor Value Unit structure. Both can be found on Passport Advantage, which can be found at http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/paresellers.
- Q3: After taking the training and reading the announcement materials I still have some questions. Who should I contact to obtain answers?
- A: You should use your normal support structure to obtain answers to your questions.

 Business Partners should contact their VAD or access additional help available through
 Passport Advantage and Passport Advantage Online for resellers. If they do not know
 the answer to your specific questions, they have access to an announcement project
 office to find the answer.

Why Processor Value Units?

- Q4: How are changes in processor technology impacting processor performance?
- A: Prior to 2005, the processor core (both RISC and CISC processors) delivered relatively similar performance for commercial workloads. Per processor became the primary licensing metric of choice because it was simple and easily transferable from platform to platform. However, some chip vendors ran into problems with heat dissipation on some processor cores. In 2005 the x86 chip vendors began using multi-core technology to drive performance improvements, while some RISC chip vendors continued to

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- improve performance at the processor core in addition to using multi-core architectures. This has resulted in a performance disparity at the processor core level between x86 and some RISC processor technologies and this disparity is projected to increase. This growing processor performance disparity is significant enough to make per processor licensing ineffective.
- Q5: How are software vendors' licensing structures responding to these processor technology changes?
- A: Software vendors have responded to processor technology changes by moving away from the traditional per processor licensing structure. Beginning in April of 2005, software vendors began introducing differentiated license entitlement requirements for new multi-core technologies. Some vendors (such as Oracle, BEA) applied percentage factors to existing licensing requirements while IBM announced a '1 license for 2 cores on x86 dual-core chip' offering. While these approaches brought licensing and pricing closer to the value customers receive from the relative performance of each new processor technology, each approach had benefits as well as drawbacks.
- Q6: How does the Processor Value Unit licensing better address these changes in the hardware technology?
- A: The Processor Value Unit licensing structure provides IBM and our customers with a sustainable licensing framework for those programs currently licensed on a per processor basis. The Processor Value Unit structure enables licensing at the processor core level while at the same time eliminates the need for fractional licensing policies which can be difficult and confusing to administer. Processor Value Unit licensing provides licensing granularity, continues to enable sub-capacity licensing, and helps prepare IBM long term for continuing technology developments, including grid and virtualization.

Value Unit Assignments

- Q7: Why is the conversion ratio of processor license entitlements to Processor Value Units 1:100?
- A: Using 100 Processor Value Units as the basis enables IBM to maintain licensing relationships without needing to adopt complex rules to account for fractional licensing. For example, a customer who is using 8 cores of a Sun UltraSparc T1 chip will require 240 Processor Value Units (8 cores x 30 Processor Value Units per core = 240 Processor Value Units), rather than 2.4 per-processor licenses, which was rounded up to 3 under the per processor licensing approach.
- Q8: How do I find out what processor type(s) my customer has?
- A: You need to ask your customer on what system(s) they plan to deploy their middleware to determine the number of Processor Value Units they will require. The Processor Value Unit calculator provides a set of questions, through either a guided or expert mode, to assist you and or your customer, in determining the required Processor Value Units. The Processor Value Unit calculator can be found at https://www-112.ibm.com/software/howtobuy/passportadvantage/valueunitcalculator.
- Q9: What happens if, after the transition, my customer has an excess number of processor value units?

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- A: The customer can retain these Processor Value Units to be deployed when existing workloads grow or new workloads are deployed. No refunds or credits will be issued.
- Q10: Why not assign Processor Value Units to each new unique processor in a processor family or each unique server in the marketplace?
- A: This approach, given the number of unique processors and/or servers in the industry, would be very complex. Some vendors have tried this in the past, but customers reported it was too difficult to administer and remain in compliance. The approach IBM is taking with Processor Value Units will reduce the administrative burden on both customers and IBM while maintaining a reasonable balance between precision and administrative simplicity.
- Q11: When will IBM announce value unit assignments for new processors and how often will the processor reference table be updated?
- A: IBM will continue to monitor the introduction of new processor technologies on which IBM middleware is deployed. We will announce value units and update the Processor Value Unit table after evaluating each new processor technology.
- Q12: How many differentiated value unit assignments will IBM have?
- A: In today's announcement, IBM has maintained the three existing processor licensing entitlement levels already in place today. For new processor technologies introduced in the future, IBM will determine the number of Processor Value Units and, when requirements warrant, new levels will be created.

Entitlement Migration/Part Numbers

- Q13: My customer has deployed IBM middleware on multiple processor architectures in the tiering structure. How will IBM know how many Processor Value Units to convert these licenses to?
- A: Every per processor Software Maintenance license entitlement will be directly exchanged for 100 Processor Value Units independent of the architecture. Using this conversion factor guarantees that no customer that is currently in compliance with our terms and conditions will find themselves short of Processor Value Units.
- Q14: How do I determine the replacement part numbers for my customer's installed licenses?
- A: The Per Processor Software Withdrawal announcement letter 906-141 dated July 25, 2006, Selected per processor Passport Advantage and Passport Advantage Express part numbers, provides a complete mapping of old per processor to new Processor Value Unit part numbers. An excel file providing a mapping of these part numbers will also be available on Passport Advantage.

Quotes, Orders, and Tools

Q15: My customer doesn't renew all of their maintenance at once. Portions of the renewal quote may still be open for more than 90 days after the quote was generated. If the quote was generated prior to this announcement, what happens to the outstanding portions of the renewal quote?

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- A: If the outstanding portions of the quote will be fulfilled by the end of October, the previous per processor part numbers will be accepted and converted to the new Processor Value Unit part numbers after the order is completed. Portions which are not fulfilled by the end of October will need to be converted to Processor Value Unit part numbers.
- Q16: My customer believes they acquired a per processor license after July 25, 2006, because they received the quote prior to this announcement. Will they also receive an email or letter describing the Software Maintenance entitlement migration?
- A: Any customer who placed an order for a per-processor licensed product from an open quote generated prior to July 25, 2006, and did not receive an email or letter from IBM by August 25, 2006, should receive an email or letter by December 15, 2006.
- Q17: The quote and ordering system defaults to a quantity of 1 Processor Value Unit even though Processor Value Unit licensing requires more than 1 value unit. Why is 1 Processor Value Unit the default in the ordering system?
- A: The ordering system accommodates all part numbers and could not be selectively updated for Processor Value Unit order quantities. Please ensure you are aware of the correct Processor Value Unit quantities required when creating quotes or placing orders.
- Q18: Can I create quotes and place orders for Processor Value Units using the same systems I use today?
- A: Creating quotes and placing orders for Processor Value Unit part numbers are available through the same systems currently available today (SQO, Distributed Software Price Book, BP eOrder and Passport Advantage Online).
- Q19: Have tools been developed in the various quote and order systems in use today to help determine the appropriate number of Processor Value Units to quote?
- A: Yes, a Processor Value Unit Table and calculator assistance tools have been created. The Processor Value Unit calculator is available as a stand alone web based tool on the Passport Advantage (PA) web site. The calculator has also been inserted into SQO, Distributed Software Price Book, BP eOrder, and PA Online. Please go to the PA website for a presentation and tutorial on the ordering tools.
- Q20: I have not previously used any SW ordering tools, but with this announcement I would like to start so I can leverage the new value unit calculator. Where can I find training on these tools?
- A: Go to the Passport Advantage website (http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/paresellers). Training information is available for the Processor Value Unit calculator and the SWG ordering tools.

Compliance / Sub-capacity

Q21: Does the IBM Tivoli License Compliance Manager recognize Processor Value Units?

A: The current version of IBM Tivoli License Compliance Manager V2.2 does not yet recognize Processor Value Units. An update is expected to be available early in 2007

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- which will include Processor Value Unit support. Existing customers should plan for a 2007 migration to the new version in 1Q 2007.
- Q22: If the IBM Tivoli License Compliance Manager program is not able to measure Processor Value Units until early 2007, how will a customer be able to determine compliance with their Processor Value Unit entitlements under sub-capacity licensing?
- A: Prior to the availability of Processor Value Unit reporting in IBM Tivoli License Compliance Manager, customers will be able to determine compliance with subcapacity licensing rules one of two ways:
 - 1. The IBM Use Report, which indicates maximum per processor deployment, can be multiplied by the standard 100 Processor Value Unit conversion factor to calculate the amount of Processor Value Units required during the quarter being reported. For example, if the IBM Use Report indicates that a maximum of 6 processors were used during the quarter (hence, 6 per-processor license entitlements required), this would equate to 600 Processor Value Units (6 per-processor license entitlements x 100 Processor Value Units per processor license entitlement = 600 value units).
 - 2. Alternatively, when a customer uploads their IBM Use Report to the IBM License Management Server web site, the reported values will be converted to Processor Value Units and displayed on the web site prior to the customer submitting the report.
- Q23: Will sub-capacity customers be required to migrate from earlier versions of IBM Tivoli License Compliance Manager to the version expected early in 2007?
- A: No, customers will not be required to migrate to any new versions of the software tool. However, customers will not be able to monitor and report entitlements in Processor Value Units using earlier versions, and will not be able to take advantage of other asset management tools designed to help a customer manage their license inventory.

System z/OEM

Q24: How are Processor Value Units different from value units available on System z or other software currently available on Passport Advantage?

- A: In general terms, all value units available from IBM provide a licensing methodology to simplify our ordering structures. The Processor Value Unit licensing structure provides a simpler licensing structure to address the proliferation of multi-core processor technologies in the x86 and RISC environments. System z already utilizes value units for some host products which can represent MSUs, engines, or messages, depending on the specific program offering. Each program offering provides a table which identifies both the specific unit of measure for the System z value units and the appropriate licensing levels. A few other IBM Software Group Passport Advantage products also use a unique value unit metric. Specific details on these offerings are provided in the program license information. Products already utilizing unique value unit licensing structures are not impacted by this announcement.
- Q25: Does this announcement impact existing OEM or royalty agreements?
- A: No. Per processor parts currently included in OEM contracts can continue to be used until the agreement expires or through July 30, 2007 whichever comes first. When the

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agreement is renewed it will be updated to reflect Processor Value Unit part numbers. However, the OEM is welcome to update their contract to reflect Processor Value Unit parts before the normal renewal date if desired.

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