

Processor Value Unit Announcement for IBM POWER6™
Answers to Frequently Asked Questions
May 22, 2007

Q1: How many Processor Value Unit (PVU) licenses are required for software on POWER6 (P6)?

A: 120 PVU licenses are required for each P6 processor core.

Q2: Is this a price increase?

A: No. See question 3 for details.

Q3: Why does P6 require more PVU licenses than previous POWER technology?

A: P6 processor core performance is significantly greater than that of P5. Therefore customers can realize significantly higher value than previous technology. In other words, fewer P6 processor cores will typically be required to run the same workload that predecessor technology can run today. This concept is commonly termed “price performance improvement” or “decreasing price per unit of throughput”. The bottom line is that customers can expect to get more for their software dollar by migrating to P6 technology.

Q4: If a customer is migrating their IBM Middleware from the same number of P5 processor cores to P6, are more PVU entitlements required?

A: Additional PVU licenses may need to be acquired. For example, let’s assume a customer is migrating from an 8-way P5 server to an 8-way P6:

	Processor Type	Number of Cores	PVUs required for each Processor Core	Total PVUs required
From:	POWER5	8	100	800
To:	POWER6	8	120	960

In this example, the customer will need to have available (or obtain) an additional 160 PVU licenses. But remember that the customer can now expect to run significantly more workload.

Q5: How does IBM assign Processor Value Units for new technology?

A: As we place new processor technologies in the Processor Value Unit structure, IBM’s key objective is to continue to deliver software price performance improvements when customers adopt these new technologies. When assigning Processor Value Units, we will also assess relative processor performance using a number of different industry standard benchmarks. These benchmarks may include both transaction processing (e.g. TPC-C) and processor based (e.g. SPECint and SPECjbb) standard benchmarks. Market conditions and the desire to maintain a simple structure will also be factors influencing the assignment of Processor Value Units.

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- Q6: Will customers deploying middleware on P6 typically realize software price performance improvements?
A: Yes. The software price per unit of throughput is typically lower on P6 than on predecessor Power technology.
- Q7: Will there be a formal external announcement letter?
A: Yes, the intent is to release a formal announcement letter, but it will be sometime after May 22, 2007.
- Q8: Has the PVU table been updated and where can I find it?
A: Yes. The table can be found externally at:
http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/pvu_licensing_for_customers
- Q9: Why did IBM move to Processor Value Units?
A: IBM's Processor Value Unit structure enables simplicity in software licensing in response to rapidly evolving hardware and multi-core chip technologies. Processor Value Unit licensing provides increased flexibility and licensing granularity, while eliminating the management difficulties presented by fractional per processor licensing.
- Q10: Can I acquire new middleware licenses using the previous per processor licensing model instead of using PVUs?
A: Per processor licensing is no longer offered with most middleware programs.
- Q11: What is the status of my license entitlements previously acquired through Passport Advantage under the per processor model?
A: IBM has two types of program entitlements in Passport Advantage:
1) Software maintenance entitlements
- Software maintenance entitlements are automatically converted using a ratio of 1 per processor license equals 100 PVU licenses upon annual maintenance renewal. Passport Advantage account records for software maintenance entitlements have been converted to PVUs.
- 2) License entitlements:
- Previously acquired per processor license entitlements were not automatically converted to PVUs, but can be used on an "as if converted" basis using a ratio of 1 per processor license equals 100 PVUs licenses

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Q12: How many previously acquired per processor licenses are required for software on POWER6?

A: Each processor core for POWER6 servers requires 120 PVU licenses. Customers can use their previously acquired per processor licenses on an “as if converted” to PVU basis using a ratio of 1 per processor license equals 100 PVUs licenses. Thus, applying this arithmetic conversion factor, 1.20 per processor license entitlements would be required for each POWER6 processor core. For example, if a customer has 12 previously acquired per processor licenses of DB2 (equivalent to 1,200 PVUs), they can use them to deploy DB2 on 10 POWER6 processor cores. An illustration of this example follows:

Processor Type	Previously acquired per processor licenses	Equivalent “as if converted” PVU licenses	Divide previously acquired PVU equivalents by PVUs required per processor core	Number of processor cores on which DB2 can be deployed
POWER6	12	1,200	Divide by 120	10

Q13: How many PVUs or previously acquired per processor licenses are required for software on other platforms?

A:

Processor Type	Number of Cores per chip	Licenses Required Per Processor Core	
		PVUs	Previously acquired per processor
POWER6 dual-core	2	120	1.20
POWER5 dual-core	2	100	1.00
Other RISC and Itanium dual-core	2	100	1.00
PowerPC 970 dual-core	2	50	0.50
x86 (Intel or AMD) dual-core	2	50	0.50
x86 (Intel or AMD) quad-core	4	50	0.50
POWER5 quad-core module	4	50	0.50
UltraSPARC T1 octi-core	8	30	0.30

Q14: Does IBM continue to define a “processor” to be the processor core?

A: Yes. As in all previous announcements, IBM still defines a processor to be the processor core. Customers are required to acquire software licenses for all activated processor cores available for use on the server. With Processor Value Unit (PVU) licensing, customers are required to acquire PVU licenses based on the number and type of processor cores.

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Q15: Is P6 eligible for sub-capacity licensing?

A: The sub-capacity licensing terms applicable for P5 systems using eligible partitioning technologies will also be applicable to P6. For more information please refer to the sub-capacity website:
<http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/subcaplicensing>

Q16: Where can I find additional information regarding PVU licensing?

A: Below are some links to helpful information regarding PVU licensing:

PVU Introduction Page:

http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/pvu_licensing_for_customers

PVU Table:

http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/pvu_table_for_customers

PVU Resources for IBM Customers:

http://www-142.ibm.com/software/sw-lotus/services/cwepassport.nsf/wdocs/pvu_customer_resources

PVU Page for Sellers (IBM Internal only):

<http://w3-103.ibm.com/software/xl/portal/viewcontent?type=doc&srcID=XT&docID=P216209A21004Q75>