

BPM A Global View

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On my last trip to Latin America I had a lively discussion with the CIO of a major financial institution regarding pricing models for BPM systems. This CIO was a proponent of CPU-based pricing which was not surprising. His company had deployed Oracle which uses the CPU-based pricing model, and he was also familiar with the Microsoft BizTalk pricing model which is also CPU-based. Many other software and database companies also use CPU-based pricing for a variety of reasons of which the most important is familiarity. I, on the other hand, was trying to convince the CIO that CPU-based pricing does not make sense for BPM systems.

Let's take a closer look at CPU-based pricing. For database and some other software applications, there is no easy measure of the value of software other than the size of the server it is hosted on. This has made the CPU pricing model rather common and relatively well understood regardless of its suitability to the software application or the current state of technology. Since software vendors want to simplify and shorten their selling cycle, they have continued to use the CPU-based model instead of coming up with a more creative pricing model that better reflects the value of their application. The thinking is, if Microsoft and Oracle are using it, it can't be all that bad. It is easier to go with a known pricing model rather than explain a new one, even if the new one is more appropriate.

It seems to me that there are three important aspects of a good pricing model. First, the pricing model must be easy to understand. This means that the customer should be able to determine easily what the price would be in the context of the customer's environment and usage patterns. Second, the pricing model must reflect the value of the software. Pricing should not be based on arbitrary factors but instead on the value the software brings to the customer. The closer it reflects value the better accepted it will be. Third, the pricing model must make sense from a technology perspective. This means that the model needs to continue to hold true as technology makes significant advances.

Since CPU-based pricing is used commonly for many applications let us evaluate its applicability for BPM systems with regards to these three aspects. Suppose your organization is planning to acquire a BPM system to automate four different processes. You have a detailed description of the processes, the number of users involved, the number of cases that will be started every day, the integrations with third-party systems, the databases, the rules that define the processes, and the performance response time required.

One would think that such a description would be a very good basis to start estimating the cost of the BPM solution including the cost of the services required to implement it. However, there is no way for you to translate these requirements in to the number of CPUs required to host the BPM system. Even if you had a much more complete description of the processes you wish to automate, you would still not be able to estimate the number of CPUs required. In fact, I would dare to submit that there is no level of detail a business person could provide that would be sufficient to estimate the number of CPUs!

The number of CPUs needed depends on a multitude of factors most of which have nothing to do with the requirements of the processes. These factors include



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the number of concurrent transactions, complexity of database access, complexity of user interfaces, underlying architecture technologies, design of the operating system, size of memory and numerous other complex factors. So, the only way the company can estimate the number of CPUs is empirically. They would need to incur the cost of deploying a BPM solution and start using it and then determine if the performance is suitable to their needs and add or remove CPUs. The number of CPUs can be determined only through trial and error, or by finding other customers who are operating in a similar context. There is no logical way to use detailed description of the processes to be automated and estimate the cost of a BPM systems using CPU-based pricing model.

Now, let us see if a CPU-based pricing model captures the value of a BPM solution. Let us assume that you have installed a BPM system to automate a process. The server you are using is a single CPU machine. The process works fine and is able to handle the workload. However, the user interface is a bit slow because the electronic forms at certain steps in the process are database intensive. The users at these steps have others things to do as a part of their job and the slow response of the user interface reduces their productivity. To improve the response time, you decide to add a second CPU. Even though the BPM system is doing exactly the same amount of work, the price of your software doubles. In what way does this accurately reflect the value of the application?

The fact of the matter is that a modern BPM system relies on many related technologies to support process automation. These include databases, enterprise content management systems, reporting and analysis tools, e-mail and others. A BPM server has to have the capacity to support these simply to make the solution complete. And, in almost all cases, customers have deployed and incurred the cost of these related technologies independent of the BPM system. Therefore, when a BPM system is hosted on a server, it is well-nigh impossible to determine what percent of the CPU is used by the BPM system for its core function and what percent is used simply to support related technologies.

The core value of a BPM system is very specific. It is to move information from one step to another as a part of the process, with each step being a user, a system or a sub-process. To support this core value a BPM system provides additional value such as notifications, exception handling, rule definitions, user interfaces, integration and numerous other functions. However, the core value is to move information so that the participants can make decisions or take actions. It is relatively easy to measure or estimate this core value.

CPU-based pricing does not in any way capture the core value of BMP and there is no logical method of translating the number of steps into the number of CPUs used. To use an analogy, when I buy an airline ticket to travel from one city to another, I am measuring value by the fact that I can travel from one city to another safely and in a specific time frame which is more attractive than other means of transportation. I do not measure value by determining the size or the number of airplane engines required to transport me to my destination. In fact, most airline passengers aren't the least bit concerned about the number or size of the airplane engines. The airplane has other passengers, baggage, air mail and other goods that are of little concern to the passengers. CPU-based pricing



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for BPM is therefore akin to charging a passenger by the number of engines an airplane has!

Finally, the CPU-based pricing model is outdated and does not fit the current norms in computer industry. Today's server and CPU technologies have made it obsolete in many ways. A company deploys a BPM system on a server and adds a second clustered server simply for the sake of backup and redundancy. The price of installation doubles even though the customer is paying for the additional server in the cluster and the amount of work done by the BPM system remains unchanged. Or, a company installs a BPM system on a server cluster with many CPUs but shares the cluster with other applications. How does anyone determine how many CPUs will be used for the BPM system or the other applications? And finally, CPU manufacturers are coming up with new "dual" or multi-core CPUs. Is a multi-core CPU counted as one CPU or multiple CPUs? With new technologies such as distributed computers and grid computing on the horizon, it will become even more impractical to determine how many CPUs are being used by a particular application. In fact, in the networked environment of today, applications are distributed and any attempts to tie them to specific CPUs for the purpose of pricing are entirely arbitrary.

So, if CPU-based pricing model does not make sense for a BPM system, the question is what does make sense? BPM vendors have proposed a variety of different pricing models and each has its own challenges. These pricing models include named user licensing, concurrent user licensing, licensing based on the number of processes automated, and some other schemes. For various reasons that will take too long to explain in this column, I believe that none of these is appropriate to BPM as they do not cater to the unique value proposition of a BPM system.

This brings us back to the same question of value and the observation that the first measure of value of a BPM system is to move information from one step to another as a part of a process. The second aspect of value is that a modern BPM system allows users to participate and benefit from its features such as the ability to start processes, be notified of process incidents, determine the status of incidents and assign tasks to other users, etc. Therefore, the two components of a value-based BPM pricing model are (i) the number of users who actively participate in business processes and (ii) the amount of work the BPM server does for the company. I use the word "active" participation because a BPM system could in practice involve thousands of people who initiate requests, place orders, or issue complaints. These users are simply initiating process incidents and may not actively participate in the decisions or actions taken during the course of the process. Likewise, because of the dynamic nature of BPM, some participants may be actively involved only infrequently. True value is measured by capturing the number of users who are actively engaged in the process, not by including passive or infrequent users.

With regards to the amount of work a BPM system is doing, the simplest way to capture this is by measuring the number of steps the system completes during a specific time period. This approach captures the value of a BPM system and is at the same time relatively easy to calculate or estimate.



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A BPM system pricing model based on number of active participants and the number of steps the BPM server can complete in a given timeframe meets all three criteria of a good pricing model that I have described. First, with respect to ease of understanding, it is easy to estimate the number of users who will actively participate and the number of steps the system will complete in a give timeframe. With this information it is simple to calculate the price of the BPM software. Second, with respect to value, a customer is paying only for the number of active users and the capacity of the BPM server to complete steps which is its core function. The price depends only on these two parameters and not on any other factors such as number of CPUs, CPU speed, or whether the CPU is shared with other applications. And finally, with respect to compatibility with technology, this pricing model is independent of the technology on which the BPM system is deployed and is applicable today as well as with emerging CPU and server technologies.

Finally, I would like to stress that BPM is a new and different type of application than most others that we are used to. Yes, it is easy to use old pricing models for convenience and minimizing the resistance that is normally accompanied with innovation. However, applying old ways of doing business to new types of applications will produce distortions for the customers as well as the vendors and over time these distortions will get worse. The pricing model is one area where BPM can lead the software industry by innovating and truly reflecting the value of the solution.

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