The Resource for Users of IBM zSeries & S/390 Systems
zJOURNAL

October / November 2010

zData Perspectives

Consider Capping to Control Costs

by Craig S. Mullins

Cost containment is an important criterion for IT departments in this day and age of financial austerity. Every decision regarding your computer resources is weighed based on not only the value that they can deliver to your organization, but upon their cost to procure, implement, and maintain. And, in most cases, if a positive return on investment cannot be calculated, the software won't be adopted, or the hardware won't be upgraded.

An often overlooked opportunity for cost containment comes from within the realm of your capacity planning group. Capacity planning is the process of determining the production capacity you use… sort of. You actually pay based on LPAR usage. Consider, for example, if you have DB2 and CICS both in a single LPAR, but DB2 is only minimally used and CICS is used a lot. Since they are both in the LPAR you'd be charged for the same amount of usage for both. But it is still better than being charged based on the usage of your entire CEC, right?

Soft Capping

You can take things a step further by implementing soft capping on your system. Soft capping is a way of setting the capacity for your system such that you are not charged for the entire capacity of your CPC, but at some lower defined capacity.

planning is the process of determining the production capacity needed by an organization to meet changing demands for its products. But capacity planning is perhaps a misnomer, because this group should not only be planning your capacity needs, but also managing your organization's capacity. Actively managing your resources to fit your demand can reduce your IT department's software bills… especially in a mainframe environment.

Why is the mainframe especially relevant? Well, the total cost of mainframe computing continues to be high; and software is the biggest portion of that cost. The pricing model for most mainframe software remains based on the capacity of the machine on which the software will run. Note that this pricing model reflects the potential usage based on the capacity of the machine, not the actual usage. Some vendors offer usage-based pricing. You should actively discuss this with your current ISVs as it is becoming more common, more accurately represents fair usage, and can save you money.

IBM offers variable workload license charging (VWLC) for many of its popular software offerings. VWLC applies to products such as z/OS, DB2, IMS, CICS, MQSeries and COBOL. It is a monthly license pricing metric designed to more closely match software cost with its usage. Some of the benefits of VWLC include the ability to:

- Grow hardware capacity without necessarily increasing your software charges
- Pay for key software at LPAR-level granularity
- Experience a low cost of incremental growth
- Manage software cost by managing workload utilization

Without soft capping you are charged the maximum R4H average per LPAR; with soft capping your charge by LPAR is based on the maximum R4H average or the defined capacity that you set, whichever is lower.

The downside to soft capping is that you are setting limits on the usage of your hardware. Even though your machine has a higher capacity, you've set a lower defined capacity and if the R4H average exceeds the defined capacity, your system is capped at the defined capacity level.

Sites that avoid soft capping usually do so because of concerns about performance or the size of their machines. This is usually misguided because soft capping coupled with capacity management can result in significant cost saving for many sites. As of z/OS 1.9 you can set a Group Capacity Limit, which sets a capacity limit for not only a single LPAR, but for a group of LPARs. This can minimize the impact of capping, but may not help much to minimize your cost.

Of course, it can be complicated to set your defined capacity appropriately, especially when you get into setting it across multiple LPARs. There are tools on the market to automate the balancing of your defined capacity setting and thereby manage to your R4H average. The general idea behind such tools is to dynamically modify the defined capacity for each LPAR based on usage. The net result is that you manage to a global defined capacity across the CPC, while increasing and decreasing the defined capacity on individual LPARs. If you are soft capping your systems but are not seeing the cost-savings benefits you anticipated, such a tool can pay for itself rather quickly.

Basically, what happens with VWLC is that your MSU usage is tracked and reported by LPAR. You are charged based on the maximum rolling four hour (R4H) average MSU usage. R4H averages are calculated each hour, for each LPAR, for the month. Then you are charged by product based on the LPARs it runs in. All of this information is collected and reported to IBM using the SCRT (Sub Capacity Reporting Tool). It uses the SMF 70-1 and SMF 89-1 / 89-2 records. So you pay for what

Summary

Managing mainframe software costs by adopting VWLC and soft capping techniques can help your company to assure a cost effective IT organization. In today's cost-cutting, ROI-focused environment, doing anything less than that is short-sighted.

From zJournal, October / November 2010.