



**epv**

IT Cost  
Under Control

# EPV Technologies

## Newsletter

June 2020

### THIS MONTH HIGHLIGHTS

- Are you wasting money because of SIIS?
- EPV User Group 2020
- New CPENABLE recommendations

### Are you wasting money because of SIIS?

A big part of performance analysts time is dedicated to find and tune system components and applications which use an excessive amount of resources, especially CPU.

The CPU usage is important because it determines a large portion of z/OS hardware and software costs.

When the software pricing is based on the monthly peak of the MSUs used in 4-hour rolling average the analysts focus mostly on the workloads contributing to those peaks.

With the advent of TFP (Enterprise Consumption solution) the situation is

changing: all the MSUs are now relevant for the software bill, no matter the time of the day when they are used.

So, with TFP, identifying and eliminating any MSU waste has become even more important than before.

In the last machine generations, IBM has identified the “Store Into Instruction Stream” (SIIS) issue as possible reason for a reduction of the processor cache effectiveness and a consequent significant increase of CPU utilization.

In this paper, after a short overview of the SIIS issue we will provide formulas and report examples to help you understand how relevant are the number of MSUs wasted in your systems because of SIIS events.

We will also provide suggestions on what you need to do to identify SIIS culprits.

*If you want to receive the paper you can reply to this e-mail writing "**Are you wasting money because of SIIS?**" in the subject*

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## EPV User Group 2020

The XVIII EPV User Group will be a “virtual” user group.

To allow for the widest possible participation, all sessions will be repeated twice and spread across four days from 21st to 24th September.

The EPV User Group is a "not to miss" event for all Performance Analysts; it will give you the opportunity to share ideas with qualified experts and to listen to some of the EPV customers experiences. The most interesting features provided by the latest versions of all EPV products will also be presented.

The EPV User Group is free of charge and reserved to EPV customers. If you are not a customer yet but you are interested in participating, please answer to this e-mail asking for an invitation.

Mark these dates in your agenda to avoid missing this event.

More details in next newsletters.

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## New CPENABLE recommendations

“The enablement of z/OS logical processors as being marked as enabled for I/O interrupts has changed for the IBM Z Systems z14 and later processors...

IBM recommends a CPENABLE = (5,15) setting for all z/OS LPARs running on z14 and later processors.”

More details at:

<http://www-03.ibm.com/support/techdocs/atmastr.nsf/WebIndex/FLASH10337>



When comparing the total CPU and zIIP time of the Address Spaces, reported by EPV, and the values, provided by our home-made programs, we find:

- The CPU time provided by EPV is slightly higher
- The zIIP time provided by EPV is lower by about 35%

Can you please explain these differences?

***EPV Technical Support answer***

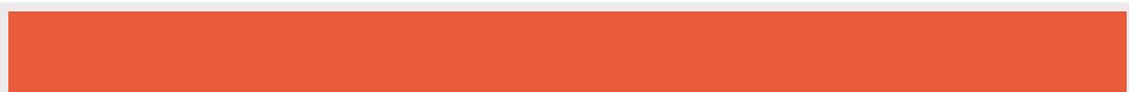
*Hello, here are the results of our analysis:*

- *EPV reports higher values for the CPU time because we include all the AS, also the “early” system address spaces, such as CONSOLE or GRS, started before SMF while your programs don’t.*
- *EPV reports lower values for the zIIP time because we show the real zIIP seconds while your programs show the zIIP seconds normalized to CPU speed; your machine is ‘knee capped’ with a normalization factor of 403, as indicated in the SMF30SNF field; you can get exactly the same numbers reported by your programs by multiplying the EPV zIIP time by the 403/256 ratio.*



## Acronyms

Acronym	Meaning	Context
BLOB	Binary Large Object	Db2
BP	Buffer Pool	Db2
BSDS	BootStrap Data Set	Db2
CLOB	Character Large Object	Db2
CSWL	Concentrate Statements With Literals	Db2
Db2	Data base 2	Db2
DBAT	Data Base Access Thread	Db2
DBCLOB	Double-Byte Character Large Object	Db2
DBD	Data Base Descriptor	Db2
DDF	Distributed Data Facility	Db2
DDL	Data Definition Language	Db2
DCL	Data Definition Language	Db2
DML	Data Manipulation Language	Db2
DRDA	Distributed Relational Database Architecture	Db2
EDM	Environmental Descriptor Manager	Db2
GBP	Group Buffer Pool	Db2
GDSC	Global Dynamic Statement Cache	Db2
IFCID	Instrumentation Facility Component ID	Db2
IFI	Instrumentation Facility Interface	Db2
IRLM	Internal Resource Lock Manager	Db2
LOB	Large Object	Db2
LRSN	Log Record Sequence Number	Db2
QMF	Query Management Facility	Db2
RBA	Relative Byte Address	Db2
RID	Row ID	Db2
RLF	Resource Limit Facility	Db2
SKCT	SKeleton Cursor Table	Db2
SKPT	SKeleton Package Table	Db2
SQL	Structured Query Language	Db2
UDF	User-Defined Function	Db2



## Quotes



*"As a well-spent day brings happy sleep, so a life well spent brings happy death"*

**Leonardo da Vinci**

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