EPV Technologies

Newsletter

June 2022

THIS MONTH HIGHLIGHTS

- Formula corrections in the “z16 Capacity Planning – Part 2” white paper
- z16 Capacity Planning – Extended counters addendum
- EPV User Group 2022
- Db2 13 manuals

Formula corrections in the “z16 Capacity Planning – Part 2” white paper

As indicated in this white paper, all the RNI formulas were provisional.
Based on IBM documentation recently published, we found that the calculation of the L1 miss insourced from the L4 local and remote cache is incomplete.
All the other formulas are correct.
If you want to receive the amended version of this paper please ask it to epv.info@epvtech.com

z16 Capacity Planning – Extended counters addendum

Extended counters, provided by the Measurement Facility in SMF 113, are essential to:

- determine the right benchmark to use in Capacity Planning studies by calculating the L1 cache miss and RNI values
- have an overall view of system performance by using the CPI index.

They can also be very useful to track other indexes such as:

- the average number of cycles needed to serve a L1 cache miss;
- the percentage of the total used cycles needed to serve a TLB1 miss;
- the average number of cycles needed to perform a synchronous compression/decompression request to the zEDC Accelerator.

We will discuss how to calculate these indexes for z16 machines in this paper.

*If you want to receive the paper you can reply to this e-mail writing "***z16 Capacity Planning – Extended counters addendum***" in the subject*

EPV User Group 2022

The XX EPV User Group will be a “virtual” user group again.
It will be spread across two days and, to allow the widest possible participation, all presentations will be repeated in two sessions:

- Session 1: 24-25 October 2022
- Session 2: 26-27 October 2022

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.

Db2 13 manuals

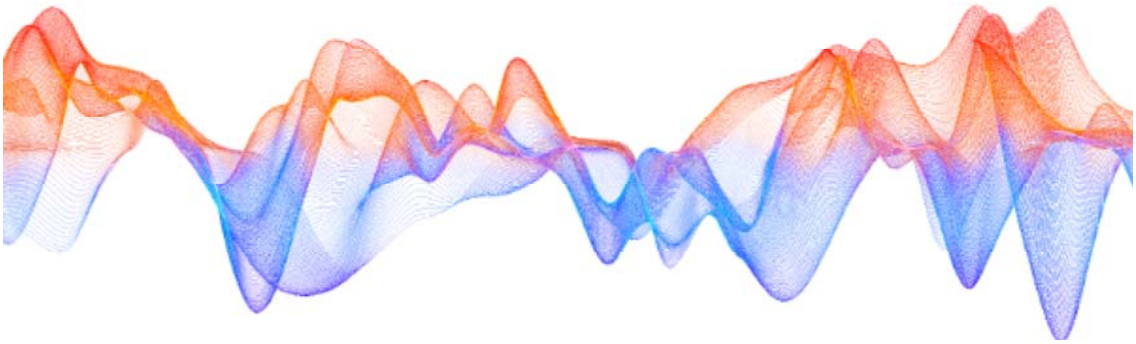
Most of the Db2 V13 manuals are now available in pdf format.
You can download them at: Db2 13 manuals

Could you please tell us the capacity (MIPS) for a zIIP processor for the models: zBC12 I03 and z15 608?

EPV Technical Support answer

As you know IBM does not provide benchmarks for the zIIP.
Anyway, on an IBM z15 608 the zIIP engine is running at full speed so the capacity of one zIIP should be the same as a z15 701 CPU or 2055 MIPS (PCI).
On a zBC12 I03 machine the zIIP engine is running at the full speed of this machine class which is the speed of a zBC12 Z01 CPU or 1064 MIPS (PCI).
Then you need to consider the MP effect to estimate the capacity of the total zIIPs in the machine.
I suggest you using the IBM zPCR tools

Little known SMF parameters



INMEM

The INMEM parameter is included in the SMFPRMxx member of the system parmlib.
It defines an in-memory resource to record SMF records in memory for real-time processing.
A maximum of 32 in-memory resources is supported.
This parameter applies to SMF on log stream only.

The syntax for the INMEM parameter is:

INMEM(rname,RESSIZMAX({nnnnM|nG}),{TYPE({aa,bb|aa,bb:zz|aa,bb:zz,...})
|NOTYPE({aa,bb|aa,bb:zz|aa,bb:zz,...})}

rname is the name of the in-memory resource; it must begin with IFASMF and can be up to 26 characters long; the resource name must be unique across resource names on other INMEM statements and logstream names on LSNAME statements.
You must also define a SAF resource in the FACILITY class to protect the in-memory resource; the SAF resource profile name must start with the IFA. high-level qualifier, followed by the same name that you specify for rname. The rname default is none.

RESSIZMAX specifies the size of the buffer available for this in-memory resource, in megabytes or gigabytes; the in-memory resource acts as a wrap-around buffer. When the buffer is full, older records are discarded as newer records are written. The RESSIZMAX default is 2 GB.

TYPE/NOTYPE is the list of SMF record types to send/not send to the in-memory resource. Subtypes cannot be specified. The TYPE/NOTYPE default is none.

Record types specified on an INMEM parameter are not written to the default logstream; if you want certain record types to be written also to a logstream, you need to specify those record types on an LSNAME parameter.

Example:

INMEM(IFASMF.EPV,RESSIZMAX(128M),TYPE(110))

This setting defines an in-memory resource, called IFASMF.EPV, with a size of 128 MB which will collect CICS transactions measurements (TYPE 110).

Quotes

"You can't be hesitant about who you are"

Viola Davis

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