EPV TECHNOLOGIES NEWSLETTER

November 2019

THIS MONTH HIGHLIGHTS

Measuring the Amazing Performance Benefits of Db2 V12

EPV Performance University 2020

EPV for z/OS V15 entered MA

FORMULA OF THE MONTH

Db2 not accounted time

Db2 Class 2 measurements provide the elapsed, CPU and zIIP time when an application is working in Db2.
Db2 Class 3 measurements provide the wait time, when an application is working in Db2, that Db2 is able to account for.

You should calculate the Db2 Not Accounted Time for all your Db2 applications with the following formula:

Db2 Not Accounted Time = Db2 Class 2 Elapsed time - (Db2 Class 2 CPU time + Db2 Class 3 suspension time)

Usually the Db2 Not Accounted time is very small or negligible.
If you see significant Db2 Not Accounted time for some business critical application you should investigate it.

See What is Db2 accounting class 2 not accounted time?
for a detailed explanation of the possible reasons of Db2 not accounted time.

METRICS

Class 2 CPU time =
QWACAJST+QWACSPTT+QWACUDTT+QWACSPNF_CP+
QWACUDNF_CP+QWACTRTE+QWACTRTT

Class 2 zIIP time =
QWACCLS2_ZIIP+QWACSP_CLS2SE+QWACUDF_CLS2SE+QWACSPNF_ZIIP+
QWACUDFNF_ZIIP+QWACTRTE_SE+QWACTRTT_ZIIP

Class 2 Elapsed time =
QWACASC+QWACSPEB+QWACUDEB+QWACSPNF_ELAP+
QWACUDNF_ELAP+QWACTREE+QWACTRET

Class 3 Wait time =
QWACAWTL+QWACAWLH+QWACAWTI+QWACAWLG+
QWACAWTR+QWACAWTW+QWAXOCSE+QWACAWTE+
QWAXSLSE+QWAXDSSE+QWAXOTSE+QWACAWTJ+
QWACAWTK+QWACAWTM+QWACAWTN+QWACAWTO+
QWACAWTQ+QWAXAWAR+QWAXAWDR+QWAXAWCL+
QWACAWTP+QWACCAST+QWAC_AT_WAIT+QWAC_PQS_WAIT+
QWACAACW+QWACAWTG+QWAXALOG+QWAXAWFC+
QWAXIXLT+QWACALBW+ QWACUDST+QWAX_LOBCOMP_WAIT+
QWAX_PIPE_WAIT

WARNINGS

These metrics refer to Db2 V12. Some of them are not available in previous Db2 versions. Additional metrics could be added in the future.

Measuring the Amazing Performance Benefits of Db2 V12

Even though Db2 V12 has been available for 3 years, many customers have not migrated yet.
As it happened with other recent Db2 versions, IBM put a lot of effort in improving Db2 performance and resource consumptions.

In this paper we will discuss the amazing benefits obtained, out-of-the-box, by one of our customers migrating to Db2 V12 M100 (V12

compatibility mode).
It's important to note that no package re-bind had been done at the time this study was performed.

We measured:
• Reduction of zIIP MIPS used by Db2 system address spaces;
• Reduction of CPU and zIIP MIPS used by Db2 applications;
• Reduction of the 4HRA peak;
• Response time improvements of most critical applications.

In the final part of the paper we will try to understand where all these benefits came from.

If you want to receive the paper you can reply to this e-mail writing " Measuring the Amazing Performance Benefits of Db2 V12" in the subject

EPV Performance University 2020

The fifth edition of the EPV Performance University will be held on February 24-28, 2020 in Rome at Hotel Cicerone.

This year the EPV Performance University will be structured in four training courses on the following topics:
• MQ performance analysis, 24 February 2020
• Db2 performance analysis, 25 February 2020
• z/OS performance analysis, 26-27 February 2020
• WLM update, 28 February 2020

These training courses have been designed to provide participants a deeper knowledge about:
• the most relevant performance metrics to use to analyse MQ performance;
• the most relevant performance metrics to use to analyse Db2 performance;
• the most relevant performance metrics to use to analyse z/OS performance;
• the most advanced and recent WLM functions.

EPV products will be used as a map to make the path easier but most of the concepts discussed will be of general interest also for not EPV customers.

The number of participants is limited to 20 so hurry up to avoid missing this opportunity.
Participants will be accepted based on a first come, first served basis.

The cost for EPV Customers/Partners will be 100,00 Euro per day.
The cost for not EPV Customers/Partners will be 500,00 Euro per day.

The courses language will be English

More details and subscription forms soon available at:
www.epvtech.com

EPV for z/OS V15 entered MA

EPV for z/OS V15 is now in Managed Availability so it can be installed under EPV Technologies control.

It includes the following major enhancements:

• z15 support

New MIPS tables are provided, including capacity values based on z/OS 2.3 benchmarks, for IBM z15 machines:

- MIPSAR23, average Relative Nest Intensity (RNI) estimated GCP MIPS
- MIPSLR23, low Relative Nest Intensity (RNI) estimated GCP MIPS
- MIPSHR23, high Relative Nest Intensity (RNI) estimated GCP MIPS
- MIPSPR23, Performance Capacity Index (PCI) estimated GCP MIPS
- MIPIAR23, average Relative Nest Intensity (RNI) estimated IIP MIPS
- MIPILR23, low Relative Nest Intensity (RNI) estimated IIP MIPS
- MIPIHR23, high Relative Nest Intensity (RNI) estimated IIP MIPS
- MIPIPR23, Performance Capacity Index (PCI) estimated IIP MIPS

All the z15 CPU Measurement Facility (CPU MF) counters, provided in the SMF 113 records, are supported as well as all the relevant performance indexes such as RNI, CPI, etc.

• z/OS 2.4 support

• IBM zHyperWrite support
In order to support the IBM zHyperWrite function all the disk device address have been extended to 5 digits.

• IBM zHyperLink support
New metrics are collected for Synchronous I/O activity when the IBM zHyperLink function is used. Specific views to evaluate zHyperLink performance are provided.
The following metrics are collected:

DB	TABLE	FIELD	DESCRIPTION
MRESA	DISKSYNC	CECSER	CEC_SERIAL_NUMBER
MRESA	DISKSYNC	DEVNR	DEVICE_ADDRESS
MRESA	DISKSYNC	EPVDATE	DATE
MRESA	DISKSYNC	EPVHOUR	HOUR
MRESA	DISKSYNC	EPVIOSYN	I/O_SYNC_FLAG
MRESA	DISKSYNC	LCU	LOGICAL_CONTROL_UNIT_ID
MRESA	DISKSYNC	SIO74CNT	TOTAL_SSCH
MRESA	DISKSYNC	SMF74SBR	AVG_SYNC_I/O_READ_MBYTE
MRESA	DISKSYNC	SMF74SBW	AVG_SYNC_I/O_WRITE_MBYTE
MRESA	DISKSYNC	SMF74SCMR	TOTAL_SYNC_I/O_READ_CACHE_MISS
MRESA	DISKSYNC	SMF74SFTR	TOTAL_SYNC_I/O_UNSUC_READ_TIME
MRESA	DISKSYNC	SMF74SFTW	TOTAL_SYNC_I/O_UNSUC_WRITE_TIME
MRESA	DISKSYNC	SMF74SLBR	TOTAL_SYNC_I/O_READS_LINK_BUSY
MRESA	DISKSYNC	SMF74SLBW	TOTAL_SYNC_I/O_WRITES_LINK_BUSY
MRESA	DISKSYNC	SMF74SNIS	TOTAL_SYNC_I/O_WRITES_NO_IMM_STORED
MRESA	DISKSYNC	SMF74SOR	TOTAL_SYNC_I/O_READ_REJECTED_OTHER
MRESA	DISKSYNC	SMF74SOW	TOTAL_SYNC_I/O_WRITE_REJECTED_OTHER
MRESA	DISKSYNC	SMF74SPR	TOTAL_SYNC_I/O_READ_TIME
MRESA	DISKSYNC	SMF74SPW	TOTAL_SYNC_I/O_WRITE_TIME
MRESA	DISKSYNC	SMF74SQR	TOTAL_SYNC_I/O_READ_REQUEST
MRESA	DISKSYNC	SMF74SQW	TOTAL_SYNC_I/O_WRITE_REQUEST
MRESA	DISKSYNC	SMF74STOR	TOTAL_SYNC_I/O_READ_TIMEOUTS
MRESA	DISKSYNC	SMF74STOW	TOTAL_SYNC_I/O_WRITE_TIMEOUTS
MRESA	DISKSYNC	STORGRUP	STORAGE_GROUP_NAME
MRESA	DISKSYNC	SYSPLEX	SYSPLEX_NAME
MRESA	DISKSYNC	SYSTEM	SYSTEM_ID
MRESA	DISKSYNC	TOTRSPMS	TOTAL_RESPONSE_TIME
MRESA	DISKSYNC	VOLSER	LOGICAL_VOLUME_ID

• New SW-Cost vision
The WLC vision and all the related views are now a subset of the SW-Cost vision.
This new vision includes support for the Tailored Fit Pricing options as well as co-located container pricing for New Applications (NewApp).

• Usability enhancements
The following major usability enhancements are provided in this version:

- New date format and date of page production
- MinMax function
- Double Header support in Column Manager

• 25 new views

If you want to install EPV for z/OS V15 please write to EPV support

RECIPES

Pasta agli agrumi

Ingredients

320 g of pasta
60 g of fresh basil
20 g of pine nuts
30 g of Parmesan cheese
grated rind of 1 lemon
grated rind of 1 orange
1/2 lemon pulp
pulp of 1 orange
extra virgin olive oil
salt and pepper

Method

We combine the basil leaves with the pine nuts in a mixer and whisk to reduce them to a pulp

Then peel a lemon,
We obtain the half-fruit segments and eliminate the seeds. Then we repeat the same operation with an orange.

We add in the mixer with the basil and the pine nuts, the citrus fruits and their previously grated rind. Pour a little olive oil and season with salt and pepper. We whisk everything until we get a creamy mixture

Transfer the pesto into a bowl, add the grated Parmesan and mix well to mix.

When the water comes to a boil, add the pasta

When it is ready, drain and pour the dressing

QUOTES

“We need fantasy to survive reality"

Lady Gaga

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