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IT Cost
Under Control

EPV Technologies

Newsletter

September 2020

THIS MONTH HIGHLIGHTS

- EPV User Group 2020 – Report
- IBM z/OS Container Extensions (zCX) use cases

EPV User Group 2020 – Report

On the days between 21st and 24th of September we had our 18th EPV User's Group, the first virtual.

The meeting was managed in different webex sessions, with all the papers repeated twice to allow the maximum number of people to attend those topics that were interesting from their point of view.

Overall it was a success with many positive feedbacks from many Customers. In total 102 different people, from 9 different Countries, participated to this virtual User Group,

As the format was appreciated we will think about similar ways to contact our users in the future.

All the presentations are available in pdf format. EPV Customers can request them by answering to this email. We will provide the credentials to download them.

IBM z/OS Container Extensions (zCX) use cases

“Is it time for you to modernize your IBM z/OS applications to allow for access to an entire ecosystem of open source and Linux on IBM Z workloads?

Is co-location of these workloads on the z/OS platform with no porting requirements of value to you?

Your existing open source or Linux on IBM Z software can benefit from being co-located and managed inside a z/OS environment; leveraging z/OS quality of service for optimized business continuity.

Your software can be integrated with and can help complement existing z/OS workloads and environments. If your software can communicate with z/OS and external components by

using TCP/IP, then now is the time to look into how IBM z/OS Container Extensions (IBM zCX) makes it possible to integrate Linux on Z applications with z/OS.”

More details
at: <http://www.redbooks.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg248471.html>



We upgraded one of our Mainframes from z15 model 408 to z15 model 504, and since then we are experiencing a serious performance degradation on the SYS1 system.

Night batch delays start of day (CICS). It ends around 11am instead of 7am.

The upgrade has been done on Thursday 27/8.

We opened a PMR to IBM.

Can you help us?

EPV Technical Support answer

By looking at the EPV for z/OS HTML pages we can confirm that, after the 27 August upgrade your batch jobs are using more CPU than before.

We focused on two batch jobs running in SYS1, that looked very stable: ICJ9 and LESF

As you can see the MSUs used by ICJ9 increased by about 20% from 27 August

LESF behavior is similar; MSUs used increased by about 20% from 27 August (increase on 2 September is lower because LESF abended).

DATE	WKL	ADDRESS SPACE	SRVCLASS	SUM	0	1	2	3	4	5
20/08/2020	JOB	LESF	TWS#CLB	19,7			16	3,6		
21/08/2020	JOB	LESF	TWS#CLB	19,6		3,6	16	0,1		
25/08/2020	JOB	LESF	TWS#CLB	19,4		6,1	13			
26/08/2020	JOB	LESF	TWS#CLB	19,8			13	6,7		
27/08/2020	JOB	LESF	TWS#CLB	23,9			1,9	5,7	13	3,4
28/08/2020	JOB	LESF	TWS#CLB	23,7			10	10	3,6	
31/08/2020	JOB	LESF	TWS#CLB	23,6			2,5	7,5	12	1,3
02/09/2020	JOB	LESF	TWS#CLB	20,8				4,6	12	4,5
03/09/2020	JOB	LESF	TWS#CLB	23,6			4,4	8,9	10	
04/09/2020	JOB	LESF	TWS#CLB	23,6			9,7	7,1	6,8	

The 8561-504 is targeted 353 MSUs while the 8561-408 is targeted 230 MSUs. Please note that all our measurements are based on these numbers.

A possible explanation of the CPU consumption increase is the PR/SM overhead due to the logical to physical CPU ratio in the machine.

With model 408 this ratio was 2,25 (18/8) while with model 504 it almost doubled at 4,25 (17/4)

This hypothesis seems corroborated by the increase in the CPU WARN TRACK TIME, which is the amount of time (in seconds) yielded to PR/SM due to warning-track processing for CPU logical processors, in SYS1.

26 Aug 2020 - SYS1																								
STATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CPU WARN TRACK OK	-	-	9	39	9	24	46	39	13	8	-	-	-	-	-	-	-	-	-	-	-	-	1	5
CPU WARN TRACK NOT OK	-	-	1	1	1	0	1	2	2	0	-	-	-	-	-	-	-	-	-	-	-	-	0	1
CPU WARN TRACK TIME	-	-	277	1.268	303	744	1.432	1.226	368	248	-	-	-	-	-	-	-	-	-	-	-	-	78	88

27 Aug 2020 - SYS1																								
STATE	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
CPU WARN TRACK OK	9	50	18	27	20	33	37	31	31	23	35	25	3	2	4	2	2	2	2	3	1	3	5	5
CPU WARN TRACK NOT OK	2	4	3	1	2	0	0	1	1	1	2	2	1	2	1	1	1	1	1	1	1	1	1	1
CPU WARN TRACK TIME	30	1.835	1.591	2.364	1.110	3.721	3.503	2.397	2.072	943	1.768	1.369	52	20	110	48	45	63	25	83	11	60	88	35

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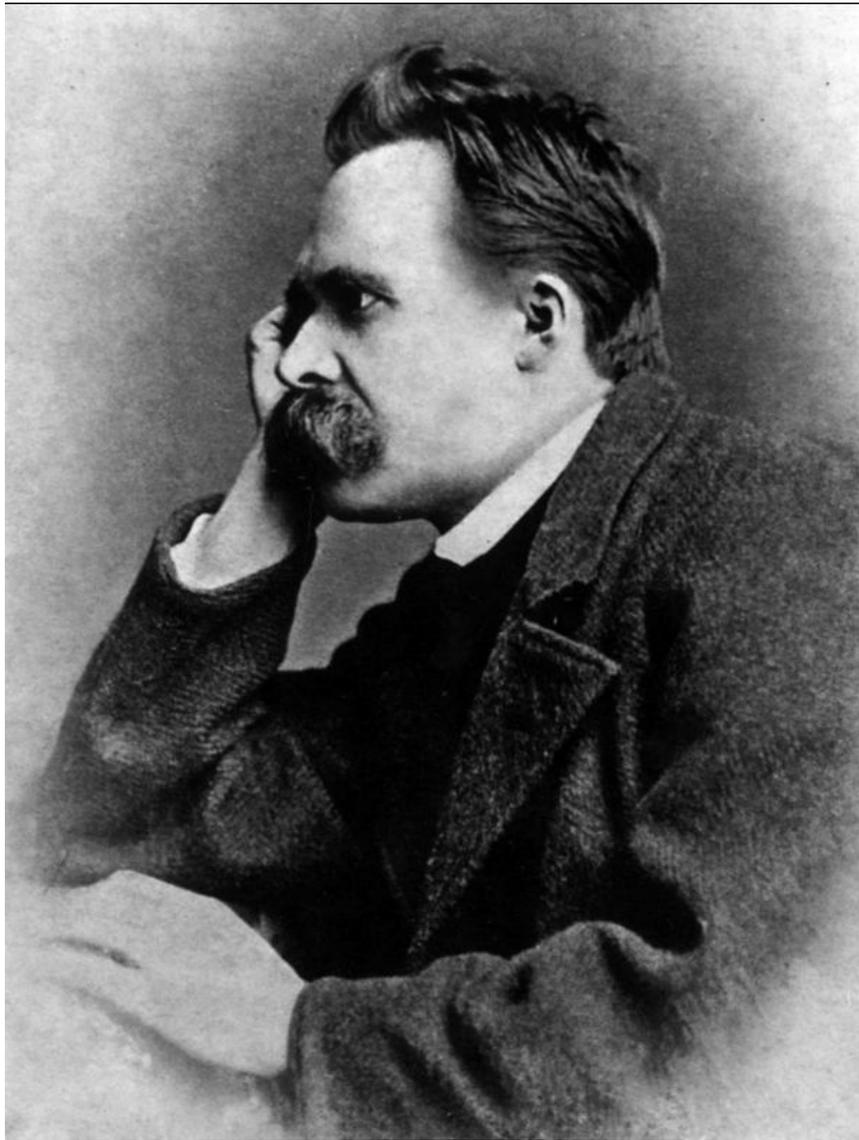
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Acronyms

Acronym	Meaning	Context
CF	Capacity Factor	Measurement
CPI	Cycles Per Instruction	Measurement
CR	Capture Ratio	Measurement
DC	Defined Capacity	Measurement
GC	Group Capacity	Measurement
L1M	Level 1 Miss	Measurement
LSPR	Large System Performance Reference	Measurement
MCF	Maximum Capacity Factor	Measurement
MIPS	Millions of Instructions Per Second	Measurement
MSU	Million Service Units	Measurement
MT	Multi Threading	Measurement
PFR	Page Fault Rate	Measurement
RMF	Resource Measurement Facility	Measurement
RNI	Relative Nest Intensity	Measurement
SIIS	Store Into the Instruction Stream	Measurement
SMF	System Management Facilities	Measurement
SU	Service Unit	Measurement
TD	Thread Density	Measurement
UIC	Unreferenced Interval Count	Measurement
zPCR	z Processor Capacity Reference	Measurement

Quotes



"You need chaos in your soul to give birth to a dancing star"

Friedrich Nietzsche

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