Is this email not displaying correctly?
View it in your browser

EPV Technologies Newsletter

Number 05–2013
29 May 2013

Editorial staff: Dino Gigli, Danilo Gipponi, Fabio Massimo Ottaviani (EPV Technologies) – Jon Olley (Inspired Solutions)

In this number:

1) Tech Papers - Large Memory Pages - Part 2
2) Tech News - Upcoming conferences
3) Tech Notes
 III EPV Israel User Group report
 XI EPV User Group announcement
4) Tech Support - Hardware correction for zEC12

Past numbers of this newsletter are available on the web at http://www.epvtech.com

1) **Tech Papers** - **Large Memory Pages - Part 2**

Ever since the days when z/OS was called MVS, virtual memory has always been managed in 4096 byte pages. However, with the advent of z/OS 1.9 and z10 machines, 1MB pages can be used, whilst 2GB pages are also supported with z/OS 1.13 and zEC12.

The reason for this fundamental breakthrough is the exploitation of 64–bit architecture; it is now possible to create huge z/OS address spaces: up to 16 ExaBytes of virtual memory. In order to back this virtual memory, the more recent IBM hardware is able to provide up to 3 TB of real memory which is, by the way, much cheaper than previously .

In 31-bit mode the maximum address space size was 2GB; it could be mapped by using 256*2.048 (524.288) 4K pages.
In 64-bit mode to map all the address space virtual memory 256*2.048*2.048*2.048*2.048 (4.503.599.627.370.500) 4K pages would be required.
It's intuitive that managing such big address spaces with so many small 4K pages

would not be very efficient; so to improve performance and to reduce CPU consumptions of memory-intensive workloads (e.g. DB2 and WebSphere applications), it is possible and advisable to use large memory pages.

In this paper after an introduction to virtual to real address translation, we will discuss what you have to do in order to exploit large memory pages and which metrics are available to analyse their utilization.

If you want to receive the paper you can reply to this e-mail writing **"Large Memory Pages - Part 2"** *in the subject*

---

2) Tech News - Upcoming conferences

EPV Technologies will present at the IBM zTechnical University, Munich, Germany, 10-14 June 2013:
- "From z10 to zEC12 Expected and Unexpected Results",
- "Saving Money by Managing CPU Utilization",
- "Where do my batch jobs spend all this time ?".

Agenda and subscription form available at: http://www-304.ibm.com/jct03001c/services/learning/ites.wss?pageType=page&c=L861347E68263B24

---

3) Tech Notes

III EPV Israel User Group report

The III EPV Israel User Group has been held in Tel Aviv, in the "BEAUTIFUL LAND of ISRAEL" congress center located in the beautiful park of YARKON, on 26th May 2013.

The event was a great success, thanks to the participation of all the EPV customers, and a great opportunity to exchange ideas and experiences.

Zvi Bruckner (MATAF) and Shimon Yosef (Israel Postal Bank) gave two excellent presentations explaining how they use EPV in their environments to improve systems and applications performance and service.

EPV Technologies presented the new versions

of the EPV for z/OS, DB2 and zLINUX products, plus some new tools (EPV for z/OS NL and EPV SMF2XL) designed to increase system programmers productivity. All the presentations were well received with many questions and discussions.

Last but not least, Benny Tal arranged an excellent lunch for all the participants, just in front of the YARKON river, where everyone could relax before the afternoon session which focused on a very hot topic: how to use the capping mechanisms provided in z/OS to manage CPU utilization and save money.

XI EPV User Group announcement

The XI EPV User Group will be held in Rome on 10th October 2013.

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 preliminary agenda will be available soon; in the meantime mark the date in your agenda to avoid missing this event.

4) Tech Support - Hardware correction for zEC12

MCL H09168-002 corrects the following issues:
- Soft capping not enforced;
- Excessive CPU overhead for small LPARs when HiperDispatch is active.