



**epv**

IT Cost  
Under Control

# EPV Technologies

## Newsletter

April 2021

### THIS MONTH HIGHLIGHTS

- EPV Next Generation – Final agenda and abstracts
- DFSORT User Guide for IBM Integrated Accelerator for Z Sort

### EPV Next Generation Final agenda and abstracts

The EPV product suite continues to evolve introducing new products and technologies.

In this virtual conference we will focus on the most recent and interesting of them.

The conference will be held on May 5th and 6th 2021.

It is reserved to EPV customers, partners and invited guests.

Preliminary Agenda		
Start	End	Description
09:00	09:15	Introduction
09:15	09:30	Dynamic queries in EPV V16
09:45	10:15	EPV zParser Realtime
10:30	11:00	EPV Control Center
11:15	11:30	EPV SMF2XL V15E
11:45	12:00	MyEPV Quick View DB Explorer
12:15	12:45	MyEPV Quick View Systems and Workloads
14:30	15:00	MyEPV Quick View Jobs
15:15	15:45	MyEPV Quick View CICS
16:00	16:30	MyEPV Quick View IMS

### **Dynamic queries in EPV V16**

The next version of the EPV products will integrate the possibility to run dynamic queries on selected tables.

This presentation will shortly describe this new feature.

### **EPV zParser Realtime**

EPV zParser Realtime is a new feature of the EPV zParser product designed to access SMF data directly in the z/OS memory and send it to an external server for data collection and processing.

In this presentation we will show an implementation designed to control CICS transaction performance.

### **EPV Control Center**

The EPV Customization GUI has been completely redesigned with web technologies to make the installation and customization of the EPV products much easier, intuitive and online.

This presentation will be dedicated to the first release of the EPV Control Center which will provide all the 'old' features.

Many new features will be added in the final release.

### **EPV SMF2XL V15E**

EPV SMF2XL is a very useful product designed to increase individual productivity of performance analysts.

The interface of this new version has been redesigned by exploiting node.js making product's usage much easier and effective.

### **MyEPV Quick View DB Explorer**

DB Explorer is a new product included in the MyEPV Quick View suite which allows to easily build dynamic queries on any MySQL, MariaDB or SQL server table.

Column labels are automatically provided for the EPV products DBs.

### **MyEPV Quick View Systems**

Systems is a new product included in the MyEPV Quick View suite which allows anyone to easily compare many different performance metrics in different z/OS areas for long periods in specific shifts and locate abnormalities very quickly.

It includes the SHIFT ANALYSIS component

### **MyEPV Quick View Workloads**

Workloads is a new product included in the MyEPV Quick View suite which allows to locate top workloads on specific days and for very long periods from any number of machines and systems. In addition specific workloads can be compared to other workloads and analysed for very long periods.

It includes the following components:

- TOP ADDRESS SPACES
- ADDRESS SPACES
- ADDRESS SPACE COMPARISON

### **MyEPV Quick View Jobs**

Jobs is a new product included in the MyEPV Quick View suite which allows to you to analyse your job and step delays, the jobs executed at the smf level and perform a job performance statistical comparison between different periods.

It includes the following components:

- DELAYS
- ANALYSIS
- COMPARISON

### **MyEPV Quick View CICS**

CICS is a new product included in the MyEPV Quick View suite which allows to analyse your CICS application and transactions at any interval duration, locate transaction with abnormal response times, obtain a complete picture of the response time distribution and perform CICS transactions statistical comparisons between different periods.

It includes the following components:

- ABNORMAL RESPONSE TIMES

- TRANSACTION INTERVALS
- RESPONSE TIME BUCKETS
- TRANSACTION COMPARISON

### **MyEPV Quick View IMS**

IMS is a new product included in the MyEPV Quick View suite which allows to analyse your IMS application and transactions at any interval duration, to locate IMS transactions with abnormal response times, obtain a complete picture of the response time distribution and perform IMS transactions statistical comparisons between different periods.

It includes the following components:

- ABNORMAL RESPONSE TIMES
- TRANSACTION INTERVALS
- RESPONSE TIME BUCKETS
- TRANSACTION COMPARISON

The subscription form is available at: [www.epvtech.com](http://www.epvtech.com)

---

## **DFSORT User Guide for IBM Integrated Accelerator for Z Sort**

Documents the important enhancement of DFSORT and DFSORT's ICETOOL which are provided by z/OS DFSORT V2R3 PTF UI90067 and DFSORT V2R4 PTF UI90068. This enhancement exploits a new sort accelerator chip known as the IBM Integrated Accelerator for Z Sort.

z/OS DFSORT V2R3 PTF UI90067 and DFSORT V2R4 PTF UI90068, first available in September, 2020, provide important enhancements to DFSORT and DFSORT's ICETOOL for exploiting the new sort accelerator chip known as the IBM Integrated Accelerator for Z Sort.

The whitepaper PH03207 is the documentation for PTFs UI90067 and UI90068. It highlights and describes the new feature provided by these PTFs for DFSORT and for DFSORT's powerful and multi-purpose ICETOOL utility. It also details new and changed messages associated with these PTFs.

This paper provides the documentation you need to start using the feature and messages associated with PTFs UI90067 and UI90068.

Download it at:



We are thinking to put a limit to the amount of capacity which can be used by a group of service classes, which run on two systems working together in a Sysplex, by exploiting resource group capping.

What are the possible issues?

Which is the suggested resource group type in our case?

***EPV Technical Support answer***

Resource group capping is optional; it should be used with care because:

- It limits the WLM ability to manage the system workload in the best possible way,
- Capping is enforced instantaneously so it may severely hurt the performance of the capped workload,
- It may happen that a lot of the LPAR target capacity is available while the workload running in the service classes, associated to the capped resource group, are suffering performance degradation.

The are four resource group types:

- Type 1: capacity limits are specified in un-weighted CPU (CPU+SRB) service units per second (SU/sec); it has a Sysplex-wide scope,
- Type 2: capacity limits are specified as a percentage of the LPAR capacity; it has a system scope,
- Type 3: capacity limits are specified as a percentage of a single general purpose CP; 100 represents the capacity of one CPU; the sum of all Resource Group minimum values should not exceed the number of processors x 100; it has a system scope,
- Type 4; capacity limits are specified in accounted (captured) workload MSU; it has a Sysplex-wide scope.

In your case to have a Sysplex-wide limit you need to use a Type 1 or Type 4 resource group. Of course, Type 4 is easier to understand and set.

Anyway, whatever type you set, the limit values, 'under the covers', are converted to service units by WLM.



### Synchronous I/O suspensions

Synchronous I/O suspensions are one of the most common reasons for excessive wait times and elapsed times of Db2 applications.

It has also to be considered that synchronous I/Os may use a significant amount of CPU which is charged to applications.

High number of synchronous read I/Os can be mostly due to:

- bad access paths,
- buffer pools too small,
- pre-fetch disabled or sequential pre-fetch threshold reached,
- no pre-fetch engines available

High number of synchronous write I/Os can be mostly due to:

- immediate write threshold reached (when more than 97,5% of buffer pool pages are not available because changed or in use),
- more than 2 checkpoints passed before pages have been written,
- no deferred write engines available.

If the average I/O time is too long, disk I/O performance should be investigated.

A best practice can be less than 2 milliseconds but it depends on many factors such as:

- used storage processors,
- design of the I/O infrastructure,
- distance between systems and disks,
- synchronous remote copy (for write only),
- exploitation of synchronous I/Os (zHyperLink technology),
- I/O load,
- page size.

The number of synchronous I/O reads and writes is provided, by Buffer Pool, in the QBSTRIO and QBSTIMW fields of the SMF 100 records.

At plan (IFCID 003) and package (239) level, only one metric, which include both read and write synchronous I/O suspensions, is provided in the following fields of SMF 101 records:

- QWACAWTI, accumulated wait time because of synchronous I/O (IFCID 003);
- QWACARNE, number of wait trace events processed for synchronous I/O waits (IFCID 003);
- QPACAWTI, accumulated wait time because of synchronous I/O that occurred while executing this package (IFCID 239);
- QPACARNE, number of wait trace events processed for synchronous I/O waits while executing this package (IFCID 239).

## Quotes



*"No matter what people tell you, words and ideas can change the world."*

**Robin Williams**

---

*Copyright © 2021 EPV Technologies, All rights reserved.*

If you've received this mail by mistake, or you don't want to receive any more such messages, please send an e-mail to [epv.info@epvtech.com](mailto:epv.info@epvtech.com) with subject "REMOVE". You'll be promptly removed from the list. If you want to subscribe to this list you can do that simply by sending an e-mail to [epv.info@epvtech.com](mailto:epv.info@epvtech.com) with a subject "SUBSCRIBE".

If you've received this mail by mistake, or you don't want to receive any more such messages, please send an e-mail to [epv.info@epvtech.com](mailto:epv.info@epvtech.com) with subject "REMOVE". You'll be promptly removed from the list. If you want to subscribe to this list you can do that simply by sending an e-mail to [epv.info@epvtech.com](mailto:epv.info@epvtech.com) with a subject "SUBSCRIBE".

**Our mailing address is:**

EPV Technologies  
Viale Angelico, 54  
Roma, RM 00195  
Italy

[Add us to your address book](#)

Our mailing address is:

EPV Technologies  
Viale Angelico, 54  
Roma, RM 00195  
Italy

Images designed by : [Freepik](#), [Flaticon](#)

---

This email was sent to [carlotta.ottaviani@epvtech.com](mailto:carlotta.ottaviani@epvtech.com)  
[why did I get this?](#) [unsubscribe from this list](#) [update subscription preferences](#)  
EPV Technologies · Viale Angelico, 54 · Roma, RM 00195 · Italy

