CPExpert™

Product Update Bulletin 2013-1

This product update forwards changes to both software and documentation. The software update is Release 23.1 of CPExpert. The release number indicates that it is the first release of 2013.

With Release 23.1, CPExpert has been updated to: (1) support CICS/TS Release 5.1; (2) provide additional reporting in the WLM Component, (3) provide updated documentation; and (4) correct errors that have been reported.

- **Support CICS Release 5.1**

    - All relevant CPExpert CICS Component code has been updated to provide support for CICS/TS Release 5.1.

    - All relevant CPExpert CICS Component documentation has been updated with references to applicable CICS/TS Release 5.1 documents from IBM.

- **Added new rules**. The following rules have been added to the CICS Component:

    Rule CIC665 (*Excessive number of events in the Event Capture Queue*) reports that the number of events in the Event Capture Queue awaiting dispatch exceeded the guidance provided to CPExpert. Captured events are placed on the Event Capture Queue if no L8 TCBs are available to be dispatched for event processing.

    Rule CIC666 (*Peak events dispatched was approaching maximum allowed*) reports that the peak number of CICS Event Processing events concurrently dispatched was *approaching* the maximum L8 Mode TCBs allowed for CICS Event Processing.

    Rule CIC668 (*A large percent of synchronous events failed*) reports that a large percent of CICS Event Processing synchronous events failed and were not emitted. If a synchronous event fails to be emitted, the capturing transaction will be backed out at a sync point with an ASP7 abend code.

    Rule CIC669 (*A large percent of events were defined as synchronous events*) reports that a large percent of CICS Event Processing events were defined as synchronous events. Synchronous emission should be used **only when necessary**, since there is a greater performance impact on the application.

    Rule CIC670 (*A large percent of transactional events were discarded*) reports that a large percent of CICS Event Processing transactional events were discarded and not emitted. If the unit of work with transactional events is rolled back or abends,

then no transactional events in that unit of work will be emitted. If the transaction fails and backs out, the events will be discarded.

Rule CIC672 (*There was a large peak of transactional events*) reports that the peak number of concurrent CICS Event Processing transactional events was larger than the guidance provided to CPExpert. From an application view, these events will be kept in the system until the unit of work commits, so transactional events can be less timely than non-transactional events. From a CICS performance view, transactional events are queued in memory. If a very large number of transactional events are queued, there could be performance degradation to CICS.

• **Modified Rules**. The following rules in the CICS Component have been modified to support changes to CICS/TS with CICS/TS Release 5.1:

Rule CIC293 (*MAXOPENTCBS was lower than MXT, with transaction isolation*) does not apply with CICS/TS Release 5.1, since transaction isolation no longer affects whether 64-bit storage is used by CICS facilities that can use 64-bit storage.

Rule CIC534 (*Excessive J8/J9 TCB steals to satisfy JVM requests*) does not apply with CICS/TS Release 5.1, since JVM pool support has been removed with CICS/TS Release 5.1.

Rule CIC540 (*JVM J8 (CICSKEY) TCB profiles that participated in mismatch/steals*) does not apply with CICS/TS Release 5.1, since JVM pool support has been removed with CICS/TS Release 5.1.

Rule CIC541 (*JVM J9 (USERKEY) TCB profiles that participated in mismatch/steals*) does not apply with CICS/TS Release 5.1, since JVM pool support has been removed with CICS/TS Release 5.1.

Rule CIC550 (*Language Environment Heap statistics were collected*) does not apply with CICS/TS Release 5.1, since the LEHEAPSTATS option in JVM profiles is obsolete with CICS/TS Release 5.1.

All rules related to MAXOPENTCBS do not apply with CICS/TS Release 5.1, since the MAXOPENTCBS parameter is obsolete with CICS/TS Release 5.1 (with CICS/TS Release 5.1, the maximum number of L8 TCBs is fixed at 2 times the value of MXT, plus 32).

• **Provide additional analysis in the WLM Component.** With CPExpert Update 22.2, the WLM component was enhanced to optionally provide basic analysis of data produced by IBM's CPU Measurement Facility (CPU MF) and recorded in SMF Type 113 records. This analysis was not available for a MICS performance data base when the CHKCPUMF analysis option was introduced in CPExpert Release 22.2, because I did not have SMF Type 113 data in a MICS performance data base. The wonderful folks at Humana provided me with the SMF Type 113 data in a MICS performance data base. With CPExpert Release 23.1, the optional CHKCPUMF analysis supports SMF data placed in a MICS performance data base.

The MICS HARCME, HARCML, and HARCMT files must be available in your performance data base if CPExpert is to analyze SMF Type 113 information.

- **Updated documentation.** This release provides all updated documentation to reflect new or revised rules. Additionally, the CPExpert Installation Guide has been revised to (1) remove documentation related to legacy components (the MVS Component, the SRM Component, and the TSO Component); and (2) provide enhanced discussion of options available with the SAS ODS features supported by CPExpert.

   The CPExpert documentation is accessible via Adobe Acrobat Reader. A free version of Adobe Acrobat Reader is available at *http://get.adobe.com/reader/*

- **Add a log of changes to code**. A log of changes to the CPExpert code for Release 23.1 has been included, and additions or changes to USOURCE members are included in the changes log. This log is titled CHANGES and shows each module changed (except when the change is minor). Interested users can review the CHANGES log to see what code changes have been made, and can easily identify new guidance variables. CPExpert follows the MXG model for releases (that is, the CHANGES log shows changes in the new release, while the CHANGESS log is an accumulation of changes).

FTP download

CPExpert Release 23.1 (both code and documentation) is available via ftp download from the CPExpert ftp server. If you prefer this method of obtaining the update, please send an email to Don_Deese@cpexpert.com to obtain instructions for ftp download, obtain your user id, and obtain your password. **If you have requested ftp download in past, the ftp download instructions will automatically be sent to you.**

Installation

I suggest that you use the following steps to install Release 23.1:

- Create a new PDS titled "prefix.CPEXPERT.V231.SOURCE".

- Create a new PDS titled "prefix.CPEXPERT.V231.USOURCE".

- Install CPExpert into the "prefix.CPEXPERT.V231.SOURCE" using the normal installation procedures described in the *CPExpert Installation Guide*.

- Install CPExpert into the "prefix.CPEXPERT.V231.USOURCE" using the normal installation procedures described in the *CPExpert Installation Guide*. This step will cause the email macros to be loaded into USOURCE.

- Copy your **old** USOURCE members into "prefix.CPEXPERT.V231.USOURCE". This step should be done so you do not have to recreate all of your unique parameters[1].

- If you elected to receive updates to CPExpert on CD, the software is distributed on the CD that contains the CPExpert user documentation.

    - **Installing CPExpert from CD to MVS**. Copy the *source.231.ebc* file from cd:\software\ as binary, to CPEXPERT.TAPE.RELV231, allocated as DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=0,AVGREC=K,SPACE(80,(150,50)), DSN=CPEXPERT.RELV231.IEBUPDTE. The *source.231.ebc* file is in standard IEBUPDTE format.

        Use the JCL described in Exhibit 2-1 of the *CPExpert Installation Guide* to install the CPExpert software. Copy your old USOURCE members as described above.

    - **Installing CPExpert from CD to PC**: Copy the cd:\software\source\ on the CD to prefix\cpexpert\rel231\source. Copy the cd:\software\usource\ on the CD to prefix.cpexpert\rel231\usource using the normal installation procedures as described in the *CPExpert Installation Guide*. This step will cause the email macros to be loaded into usource. Copy your old usource members as described above. Make sure that you update your usource(genguide) member to specify **%LET SOURCE =user_directory;** statement to point to the new SOURCE directory.

- **Downloading via ftp**: If you elected to download updates from my ftp server, you can copy the *source.231.ebc* file to CPEXPERT.TAPE.RELV231, allocated as DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=0,AVGREC=K,SPACE(80,(150,50)), DSN=CPEXPERT.RELV231.IEBUPDTE. The *source.231.ebc* file is in standard IEBUPDTE format.

    The updated CPExpert user documentation also will be available on the ftp site. It is your option whether you wish to download only the manuals, or also download the individual rule documents. If you wish to download the individual rule documents, they will be available as pdf files in the *Individual_Rule_Documentation.zip* on the ftp site.

- If you have implemented the CPExpert option to produce output to the SAS Output Delivery System (ODS) and if you have exercised the LINKPDF option so you can "click" on a rule in the html output to see the documentation, **please remember to load the new individual rule documentation onto your system**.

- If you chose to implement the xxxHTML option (e.g., WLMHTML) to provide your own SAS ODS HTML statement parameters, please place your own macros into USOURCE and concatenate the USOURCE pds ahead of the SOURCE pds.

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[1]The exception to this statement is if you chose to use the "yesterday" option in selecting data. The "yesterday" calculation is done by a PREVIOUS macro contained in USOURCE(GENGUIDE). The PREVIOUS macro is placed in USOURCE so you can select "yesterday" as the immediate previous day, or can define "yesterday" as any other previous day you chose. Placing the PREVIOUS macro in USOURCE(GENGUIDE) allows you to make such a modification, without altering a SOURCE member. Consequently, if you copy your old USOURCE(GENGUIDE) member to CPEXPERT.V231.USOURCE, you may wish to append the PREVIOUS macro from your old USOURCE(GENGUIDE) into your new USOURCE(GENGUIDE).

- If you chose to implement the CPExpert email option, please update the xxxEMAIL modules in USOURCE to reflect your unique email requirements.

Thanks

I would like to say "**Thank you**" to the following individuals. These folks have proposed new features, graciously sent me test data, suggested documentation changes since the last Update Bulletin, or discovered errors :

Scott Barry (SBBWorks, Inc, FL)
Frank Bereznay (IBM Corp., at Kaiser Permanente, CA)
Janice Wardle-Borys (Royal Canadian Mounted Police, Canada)
Glenn Bowman (Wakefern Food Corporation, NJ)
Paul C. Gordon (Bank of America, VA)
Wayne Hammond (Bank of America, GA)
Barry Merrill (Merrill Consultants, TX)
Vincent J. Mthimunye (Social Security Administration, MD)
Rick Ralston (Humana, KY)
Harald Seifert (HUK-Coburg, Germany)
Bruce Widlund (Merrill Consultants, TX)

Please send me an email if you have suggestions, you want new features, or you would like to see more or different reporting done by CPExpert.

Best regards,

Don Deese