



## Product Update Bulletin 2016-1

This product update forwards changes to both software and documentation. The software update is Release 26.1 of CPEXPERT. The release number indicates that it is the first release of 2016. With Release 26.1, CPEXPERT has been updated to: (1) change the frequency of CPEXPERT updates, (2) provide changes to the CICS Component; (3) provide changes to the DB2 Component; (4) provide changes to the WLM Component; (5) provide changes to the WebSphere Component; and (6) correct errors that have been reported.

**Frequency of CPEXPERT updates.** Since I introduced CPEXPERT 1991, I have published two updates each year: a Spring update and a Fall update. I have maintained this frequency of two updates each year, for a total of 50 CPEXPERT updates that have been issued!

The CPEXPERT update frequency was originally based on IBM's schedule of updating z/OS. My CPEXPERT updates were to provide current CPEXPERT analysis of the most recent IBM updates to IBM hardware and software. In 1991, IBM issued two updates each year to MVS and z/OS. IBM decreased their update frequency to once per year and now provides updates only once every two years.

I recently became aware of a disturbing reluctance by many users of CPEXPERT to install the current CPEXPERT update. I have discovered that the CPEXPERT updates languish uninstalled at many user sites, and are installed only once per year or less frequently.

In discussing the issue with various CPEXPERT users, many reasons have been given for their reluctance to install the most recent CPEXPERT update. As examples:

- The performance analyst is too busy to install the most recent update,
- There is too much paperwork required to be completed at the user site to make any change to their systems,
- The site has rigid security requirements and any system changes must have high-level management approval,
- The site has not upgraded their own environment and cannot take advantage of CPEXPERT's support for new operating systems or subsystems (such as new CICS/TS versions, or new DB2 versions).

As I have become aware of the perceived problem of too many CPEXPERT updates, I have decided to issue only one CPEXPERT update each year.

Although CPEXpert formal updates will be issued only once per year, I will gladly entertain development of enhancements whenever suggested by CPEXpert users.

- **Changes to the CICS Component.** The main changes to the CICS Component with CPEXpert Release 26.1 were to:
  - **Support CICS Release 5.3**
    - All relevant CPEXpert CICS Component code has been updated to provide support for CICS/TS Release 5.3.
    - All relevant CPEXpert CICS Component documentation has been updated with references to applicable CICS/TS Release 5.3 documents from IBM. Significant changes to CICS Component documentation include:
      - Rule CIC101: (*The CICS region reached MAX tasks too often*) With CICS/TS Release 5.3, IBM introduced the **optional performance tuning for HTTP connections** feature. When this option is enabled, and the region is at capacity, requests are queued in the TCP/IP backlog. This is done instead of queuing HTTP requests on MXT in CICS; requests are queued in the TCP/IP backlog. The advantage of this option is that MXT is not exceeded by a surge of HTTP requests. A disadvantage of this option is that the number of times MXT is reached might increase.
  - **Other Changes.** Other changes to the CICS Component were to correct errors reported by users.
- **Changes to the DB2 Component.** The main changes to the DB2 Component with CPEXpert Release 26.1 were to provide additional rules resulting from DB2 analysis<sup>1</sup> by CPEXpert:
  - Rule DB2-285 (*Failures because the EDM skeleton pool was full*) reports that application failures were caused by the EDM skeleton pool being full.
  - Rule DB2-286 (*Failures because the EDM statement pool was full*) reports that application failures were caused by the EDM statement pool being full.
  - Rule DB2-287 (*Failures because the EDM DBD pool was full*) reports that application failures were caused by the EDM data base descriptor (DBD) pool being full.
  - Rule DB2-288 (*Maximum number of concurrent connections to DB2 from batch*) reports a warning that the maximum number of concurrent connections to DB2 from batch is approaching the value of the IBACK variable specified in ZPARMS.

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<sup>1</sup> Thanks to **Harald Seifert** and the **DB2 Team** (HUK Coburg, Germany) for suggesting this analysis and the resulting rules.

- Rule DB2-289 (*Maximum number of concurrent connections to DB2 from TSO*) reports a warning that the maximum number of concurrent connections to DB2 from TSO is approaching the value of the IDFORE variable specified in ZPARMS.
- Rule DB2-290 (*Maximum number of allied threads allocated concurrently*) reports a warning that the maximum number of concurrent connections to DB2 from allied threads was approaching the value of the CTHREAD parameter specified in ZPARMS.
- Rule DB2-292 (*Maximum number of data sets concurrently open*) reports that the maximum number of data sets concurrently opened since DB2 was started exceeded the guidance provided to CPEXpert.
- **Changes to the WLM Component.** The main changes to the WLM Component with CPEXpert Release 26.1 were to correct minor errors reported by users.
- **Changes to the WMQ Component.** The change with the WMQ Component for Release 26.1 was to add code to check for the MQMBUFER file having zero observations

If OPMODE(NEWFUNC,800) is in effect with WebSphere MQ V8, buffer manager statistics will go into SMF 115 (subtype 215), rather than the MQMBUFER file. In this case, the SMF 115 (subtype 215) information is placed into MXG TY115215 file and the MQMBUFER file will have zero observations.. Interestingly, the TYP115215 file is essentially identical to the MQMBUFER file (all variables that would be in the MQMBUFER file are in the TY115215 file).

- **Add a log of changes to code.** A log of changes to the CPEXpert code for Release 26.1 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 CHANGES log is an accumulation of changes).

## FTP download

CPEXpert Release 26.1 (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 26.1:

- Create a new PDS titled "prefix.CPEXPRT.V261.SOURCE".
- Create a new PDS titled "prefix.CPEXPRT.V261.USOURCE".
- Install CPEXpert into the "prefix.CPEXPRT.V261.SOURCE" using the normal installation procedures described in the *CPEXpert Installation Guide*.
- Install CPEXpert into the "prefix.CPEXPRT.V261.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.CPEXPRT.V261.USOURCE". This step should be done so you do not have to recreate all of your unique parameters<sup>2</sup>.
- 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.261.ebc* file from cd:\software\ as binary, to CPEXPRT.TAPE.RELV261, allocated as DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=0,AVGREC=K,SPACE(80,(150,50)), DSN=CPEXPRT.RELV261.IEBUPDTE. The *source.261.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\rel251\source. Copy the cd:\software\usource\ on the CD to prefix.cpexpert\rel251\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.261.ebc* file to CPEXPRT.TAPE.RELV261, allocated as DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=0,AVGREC=K,SPACE(80,(150,50)), DSN=CPEXPRT.RELV261.IEBUPDTE. The *source.261.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

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<sup>2</sup> 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 CPEXPRT.V261.USOURCE, you may wish to append the PREVIOUS macro from your old USOURCE(GENGUIDE) into your new USOURCE(GENGUIDE).

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.
- 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:

**Ufuk Aksoz** (Isbank, Turkey)  
**Scott Barry** (SBBWorks, Inc, FL)  
**Glenn Bowman** (Wakefern Food Corp., NJ)  
**Tom Crutcher** (Humana, KY)  
**Thomas D. Foster**, Contractor (Social Security Administration)  
**Wayne Hammond** (Bank of America, GA)  
**Barry Merrill** (Merrill Consultants, TX)  
**Matthew Rennebohm** (State of Wisconsin)  
**Harald Seifert** (HUK-Coburg, Germany)  
**Daniel Ternosky**, Contractor (Social Security Administration)

Please send 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

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