



| z/TPF V1.1

## TPF Users Group - Spring 2009

z/TPF APAR PJ34869

## Offline FACE Table Compare Tool

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Venue: System Control Program Subcommittee

AIM Enterprise Platform Software  
IBM z/Transaction Processing Facility Enterprise Edition 1.1.0

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# fctbval - Overview

- **The purpose of this tool is not only to assist in detection of coding errors, but to highlight changes that would affect a database reorganization on the online system.**
- **Linux command function will:**
  - Validate – same validation as done by ZFCTB LOAD
    - Checking is the same as released with APAR PJ31376 (PUT 4)
  - Difference report – similar to Linux diff command
  - Move report – determines record moves
- **Performs functions between two FCTB.so files**
  - Usually between the BASE and ALTERNATE FCTBs
- **Satisfies the following TPFUG requirement:**
  - Req# D06002F - Offline FACE Table comparison tool

# fctbval – Validate Function

- **The following validations are performed:**
  - Compare the CTSD and CONK
  - Compare the SS name, number of SSUs and the order and names of the SSUs and make sure there are no changes
  - Validate that pool types that exist in the base FCTB also exist in the alternate FCTB at the same FACE equate value
  - Validate IBM checked records and any user checked records for changes

# fctbval - Command Format

- **fctbval [-m -v] {basefctb altfctb | --help}**
- **-m**
  - writes a list of records to the standard output stream (stdout) that have different database locations defined in the base FACE table (FCTB) and in the alternate FCTB. Specify this option when you plan to use the alternate FCTB for migration in preparation for a database reorganization (DBR).
- **-v**
  - displays only validation exceptions that will cause the alternate FCTB to fail during the ZFCTB LOAD command. The FCTB differences are not displayed.

## fctbval - Command Format cont'd

- **basefctb**
  - is the relative path name of the FCTB shared object that is currently in production. This is referred to as the base FCTB.
- **altfctb**
  - is the relative path name of the FCTB shared object that is to be loaded. This is referred to as the alternate FCTB.
- **--help**
  - displays help information about the parameters that you can specify for the fctbval command.
- **Use “man fctbval” on zLinux for more details**

# fctbval – Validation Report

```

billco@linuxtpf: ~/pj 34869> fctbval -v /ztpf/bss/load/FCTB.so FCTBBC.so
Thu Mar 26 10:42:29 2009 :: fctbval -v /ztpf/bss/load/FCTB.so FCTBBC.so
  Base FCTB path: /ztpf/bss/load/FCTB.so
  Alternate FCTB path: /home/billco/pj 34869/bss/load/FCTBBC.so
*****
*
*   FACE table validation
*
*****

FCTB4020I 10.42.29 VERIFICATION COMPLETED WITH NO ERRORS

```

## fctbval – Validation Report cont'd

```

bi l l co@l i nuxtpf: ~/pj 34869> fctbval -v /ztpf/bss/l oad/FCTB. so FCTBBC. so
Thu Mar 26 11:08:44 2009 :: fctbval -v /ztpf/bss/l oad/FCTB. so FCTBBC. so
  Base FCTB path: /ztpf/bss/l oad/FCTB. so
  Al ternate FCTB path: /home/bi l l co/pj 34869/bss/l oad/FCTBBC. so
*****
*                                                                 *
*   FACE table validation                                       *
*                                                                 *
*****
FCTB4005E 11.08.44 BASE FCTB RECORD TYPE  #I PL4      AT ORDINAL
              O DI FFERS WI TH
              PARAMETER RECNO/CONTRACTI ON
FCTB4021T 11.08.44 VERI FI CATI ON COMPLETED WI TH ERRORS

```

## fctbval – Diff Report

- **Differences between the two face tables will also be shown. Some examples of differences are (but not limited to):**
  - Additions/Deletions to pool sections and fixed records
  - Changes in MCHR's
  - Changes in UFT/FTIs
  - Changes in record sizes
  - Changes in duplication (simplex to duplex)
  - Changes in RAMFIL statements (additions, deletions, uniqueness)
  - Deactivated pool sections



## fctbval – Diff Report cont'd

```

*****
*   FACE table diff report                                     *
*                                                                 *
*   '<' indicates this RAMFIL is from the base FACE table     *
*   '>' indicates this RAMFIL is from the alternate FACE table *
*                                                                 *
*   '<' grouped with '>' indicates a change detected in the RAMFIL *
*   A singular '<' indicates this RAMFIL has been deleted     *
*   A singular '>' indicates this RAMFIL has been added      *
*                                                                 *
*   Note: The RAMFIL statements shown in the diff listing     *
*   are a representation based upon the binary data in the   *
*   FACE table shared-object. They will not exactly match    *
*   the RAMFIL statements coded in your SIP source file.     *
*                                                                 *
*****

```

## fctbval – Diff Report cont'd

---

< RAMFI L

RECI D=#I PL4, RECNO=240, TYPE=4SA, EQU=237, DUPE=YES, BASE=0211009, UFTI 5=(52, 313),  
RESTORE=NO, USER=(\*, \*, \*), FI RSTM0D=0, NUMMOD=10

> RAMFI L

RECI D=#I PL4, RECNO=239, TYPE=4SA, EQU=237, DUPE=YES, BASE=0211009, UFTI 5=(52, 313),  
RESTORE=NO, USER=(\*, \*, \*), FI RSTM0D=0, NUMMOD=10

## fctbval – Diff Report cont'd

---

< RAMFI L RECI D=#HOTREC2, RECNO=20, TYPE=4SB, EQU=232, DUPE=YES, BASE=0000008, UFTI 5=(51, 134),  
RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=32

---

< RAMFI L RECI D=#I PKI , RECNO=100, TYPE=4SA, EQU=309, DUPE=YES, BASE=0000208, UFTI 5=(53, 70),  
RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

> RAMFI L RECI D=#I PKI , RECNO=100, TYPE=4SA, EQU=310, DUPE=YES, BASE=0000208, UFTI 5=(53, 70),  
RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

---

< RAMFI L RECI D=#DFALG09, RECNO=101, TYPE=4SA, EQU=310, DUPE=YES, BASE=0000209, UFTI 5=(53, 71),  
RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

> RAMFI L RECI D=#DFALG09, RECNO=101, TYPE=4SA, EQU=232, DUPE=YES, BASE=0000209, UFTI 5=(53, 71),  
RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

---

< RAMFI L RECI D=#MODDWN, RECNO=12, TYPE=4SA, EQU=311, DUPE=YES, BASE=0151810, UFTI 5=(51, 848),  
RESTORE=NO, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

> RAMFI L RECI D=#MODDWN, RECNO=12, TYPE=4SA, EQU=309, DUPE=YES, BASE=0151810, UFTI 5=(51, 848),  
RESTORE=NO, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=10

## fctbval – Diff Report cont'd

---

< RAMFI L

RECI D=#HOTREC2, RECNO=20, TYPE=4SB, EQU=232, DUPE=YES, [BASE=0000008](#), UFTI 5=(51, 134),

RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=32

---

> RAMFI L

RECI D=#HOTREC2, RECNO=20, TYPE=4SB, EQU=232, DUPE=YES, [BASE=0000307](#), UFTI 5=(51, 134),

RESTORE=YES, USER=(\*, \*, \*), FI RSTMOD=0, NUMMOD=32

## fctbval – Move Report

- **Detects when records have moved from one location to another**
- **Starting record ordinals must match to be considered as being moved**
- **All records are checked for move (pools, fixed, including unique fixed)**
- **Validation is performed for move “correctness”**
  - Record “to” location must be SPARE in base FCTB
  - Record “from” location must be SPARE in alternate FCTB

# fctbval – Move Report cont'd

\*\*\*\*\*

\* \*

\* FACE Record Move Report \*

\* \*

\*\*\*\*\*

FCTB4055W 15.41.42 MOVE DETECTED: RECID #HOTREC2 MIGHT HAVE MOVED FROM  
BASE MCHR 001F0000000807 to ALTERNATE MCHR 000C000300070C

\*\*\*\*\*

\* \*

\* Warni ngs and Noti ces \*

\* \*

\*\*\*\*\*

FCTB4054W 15.41.42 CHANGES WERE DETECTED IN THE FIXED FILE CONFIGURATI ON  
DETERMINE WHETHER A DATABASE REORGANI ZATI ON IS REQUI RED

# fctbval – Move Report cont'd

\*\*\*\*\*

\* \*

\* FACE Record Move Report \*

\* \*

\*\*\*\*\*

FCTB4055W 15.45.08 MOVE DETECTED: RECID #HOTREC2 MIGHT HAVE MOVED FROM  
 BASE MCHR 001F0000000807 to ALTERNATE MCHR 00090000000808

FCTB4051W 15.45.08 TARGET RECORD MOVE AREA NOT SPARE OR IFORMAT IN BASE FCTB

\*\*\*\*\*

\* \*

\* Warni ngs and Noti ces \*

\* \*

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FCTB4054W 15.45.08 CHANGES WERE DETECTED IN THE FIXED FILE CONFIGURATION  
 DETERMINE WHETHER A DATABASE REORGANIZATION IS REQUIRED

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