



# Abend-AID's Hidden Treasure Chest of Capabilities

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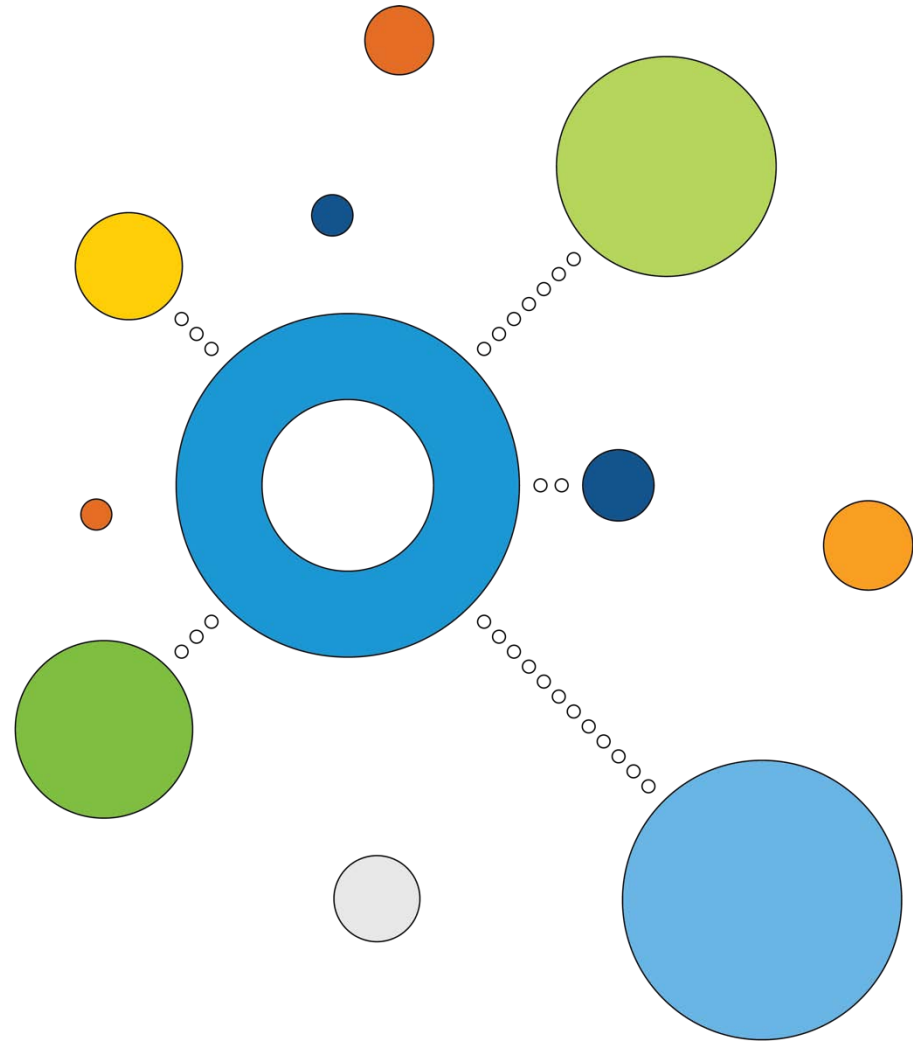
**Brad Kaehler**  
Account Consultant



**Joe Zozzaro**  
Account Consultant

# Agenda

1. Root Cause Analysis
2. Extended Search
3. Perform Flow
4. Seamless Integration Between Abend-AID and File-AID
5. Using SNAP-AID



# ROOT CAUSE ANALYSIS

# Root Cause Analysis

- Analyzes every field on abending statement to identify those that appear invalid and attempts to analyze how field was initialized/updated and where it originated
- Displayed in Diagnostic Summary in Abend-AID Viewer
- Available for:
  - Abend-AID for Batch reports containing SOC7, SOC1, SOC9, SOC4 and SOCB abends
  - Abend-AID for CICS includes all data-related ASRA abends; compiled listing must be available
- Root cause analysis is especially helpful when bad data is being passed between programs

# Root Cause Analysis

```
Abend-AID ----- Diagnostic Summary ----- Row 000001 of 000083
COMMAND ==> _                               SCROLL ==> CSR

A data exception occurred during execution of program CWAACR. The expected
completion code is S0C7.

Analysis of Error
Root cause analysis is available for this abend.

Impact Analysis is available for this abend.

The data exception occurred in the following statement:

000081          COMPUTE H-EMP-WAGES = H-EMP-HOURS * H-EMP-RATE.

This statement is contained in paragraph 1000-PROCESS-HOURLY in program
CWAACR .

Current values of fields on this statement:

Level/Field Name          Picture/Type          Value
01 H-EMP-WAGES            9(5)V99  COMP-3      +0
01 H-EMP-HOURS            9(2)                  37
02 H-EMP-RATE              # 9(3)V99  COMP-3      X'025C5B'

# - Indicates field contains invalid data that does not match the
field picture.
```

# Root Cause Analysis

```
Abend-AID ----- Root Cause Analysis Menu ----- Row 000001 of 000003
COMMAND ==> _ SCROLL ==> CSR
                               ==>
Select each field for Root Cause Analysis.
  1. H-EMP-WAGES
  2. H-EMP-HOURS
  3. H-EMP-RATE                               Content does not match definiti
***** BOTTOM OF DATA *****
```

4B :00.1 02/16

# Root Cause Analysis

```
Abend-AID ----- Root Cause Analysis Information -- Row 000001 of 000042
COMMAND ==> _ SCROLL ==> CSR

Fault Details

1. Program CWAACOB1 contains the statement in error.

000081          COMPUTE H-EMP-WAGES = H-EMP-HOURS * H-EMP-RATE.

2. The content of H-EMP-RATE does not match its field definition. It
   contains the value X'025C5B'. This was likely the cause of the S0C7
   abend.

3. H-EMP-RATE is defined within the 01 FILLER structure in the LINKAGE
   SECTION of called program CWAACOB1. Its value was passed by calling
   program CWAACOB1.

4. Field in error corresponds to field 03 SA-EMP-RATE in calling program
   CWAACOB1.

Level/Field Name          Picture/Type          Value
02 H-EMP-RATE              # 9(3)V99  COMP-3      X'025C5B'
   defined in LINKAGE SECTION in program CWAACOB1.
01 EMPLOYEE-SALARY-AREA
  02 SA-HOURLY-EMPLOYEE-DATA
    03 SA-EMP-RATE          # 9(3)V99  COMP-3      X'025C5B'
```

4B :00.4 02/16

Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 6:25 PM



# Root Cause Analysis

```
Abend-AID ----- COBOL Listing ----- Row 000031 of 000046
COMMAND ==>> _ SCROLL ==>> CSR
Source Program Name... CWAACHOUR
Program Compile Date.. 08JUL2019 Source Listing Date... 08JUL2019
Program Compile Time.. 14:08:15 Source Listing Time... 14:08:15

To reset display to the abending/last executed statement, select RESET
To reset display to the point of entry into this listing, select ENTRY

Source Line
*****
LINKAGE SECTION.
01 H-EMP-WAGES          9(5)V99  COMP-3  +0
01 H-EMP-RATE-INFO
  02 HOURLY-RATE        9(3)      COMP-3  +25
  02 HOURLY-INDICATOR   X          $
  02 HOURLY-OT-RATE     X(2)       SPACES
01 FILLER
  REDEFINES H-EMP-RATE-INFO
  02 H-EMP-RATE         # 9(3)V99  COMP-3  X'025C5B'
01 H-EMP-HOURS          9(2)
01 H-OT-HOURS           # 9(2)
  LOW-VALUES
01 H-OT-AMOUNT          9(5)V99  COMP-3  +0
01 H-EMP-COMPENSATION   9(5)V99  COMP-3  +433300
01 H-END-OF-MONTH-SW   X          N
01 H-ANNIVERSARY-IND   X          N
01 H-TERMINAL-DATE     X(6)       100700

:00.1 02/16
Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 3:21 PM
```



# Root Cause Analysis

```
Abend-AID ----- Root Cause Analysis Information -- Row 000001 of 000042
COMMAND ==>> _ SCROLL ==>> CSR

Fault Details

1. Program CWAACOB1 contains the statement in error.
000081          COMPUTE H-EMP-WAGES = H-EMP-HOURS * H-EMP-RATE.

2. The content of H-EMP-RATE does not match its field definition. It
   contains the value x'025C5B'. This was likely the cause of the S0C7
   abend.

3. H-EMP-RATE is defined within the 01 FILLER structure in the LINKAGE
   SECTION of called program CWAACOB1. Its value was passed by calling
   program CWAACOB1.

4. Field in error corresponds to field 03 SA-EMP-RATE in calling program
   CWAACOB1.

Level/Field Name          Picture/Type          Value
02 H-EMP-RATE              # 9(3)V99  COMP-3    x'025C5B'
   defined in LINKAGE SECTION in program CWAACOB1.
01 EMPLOYEE-SALARY-AREA
  02 SA-HOURLY-EMPLOYEE-DATA
    03 SA-EMP-RATE          # 9(3)V99  COMP-3    x'025C5B'
   defined in LINKAGE SECTION in program CWAACOB1

4B  :00.4  02/16
Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 6:25 PM
```

# Root Cause Analysis

```
COMMAND ==>> _ SCROLL ==>> CSR
Source Program Name... CWAACOB1
Program Compile Date.. 08JUL2019
Program Compile Time.. 14:08:11
Source Listing Date... 08JUL2019
Source Listing Time... 14:08:11

CALL Statement

000408          CALL  CWAACOB1  USING  EMP-WAGES,
000409          SA-EMP-RATE,
000410          SA-EMP-HOURS,
000411          OT-HOURS,
000412          OT-AMOUNT,
000413          EMP-COMPENSATION,
000414          END-OF-MONTH-SW,
000415          ANNIVERSARY-IND,
000416          TODAYS-DATE,
000417          WA-EMP-HIRE-DATE.

The order of the arguments in
the 'call' statement line up with
the order of the variable in the
Linkage Section

Argument Definitions and Values

01 PGM-NAME
02 CWAADATE          X(8)          CWAADATE
02 CWAACOB1         X(8)          CWAACOB1
02 CWAACOB1         X(8)          CWAACOB1
02 CWAASUBC         X(8)          CWAASUBC
01 TOTAL-LENGTH
```

4.8 :00.1 02/16

Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 3:28 PM

# Root Cause Analysis

```
Abend-AID ----- Root Cause Analysis Information -- Row 000001 of 000042
COMMAND ==>> _                               SCROLL ==>> CSR

Fault Details

1. Program CWAACOB1 contains the statement in error.

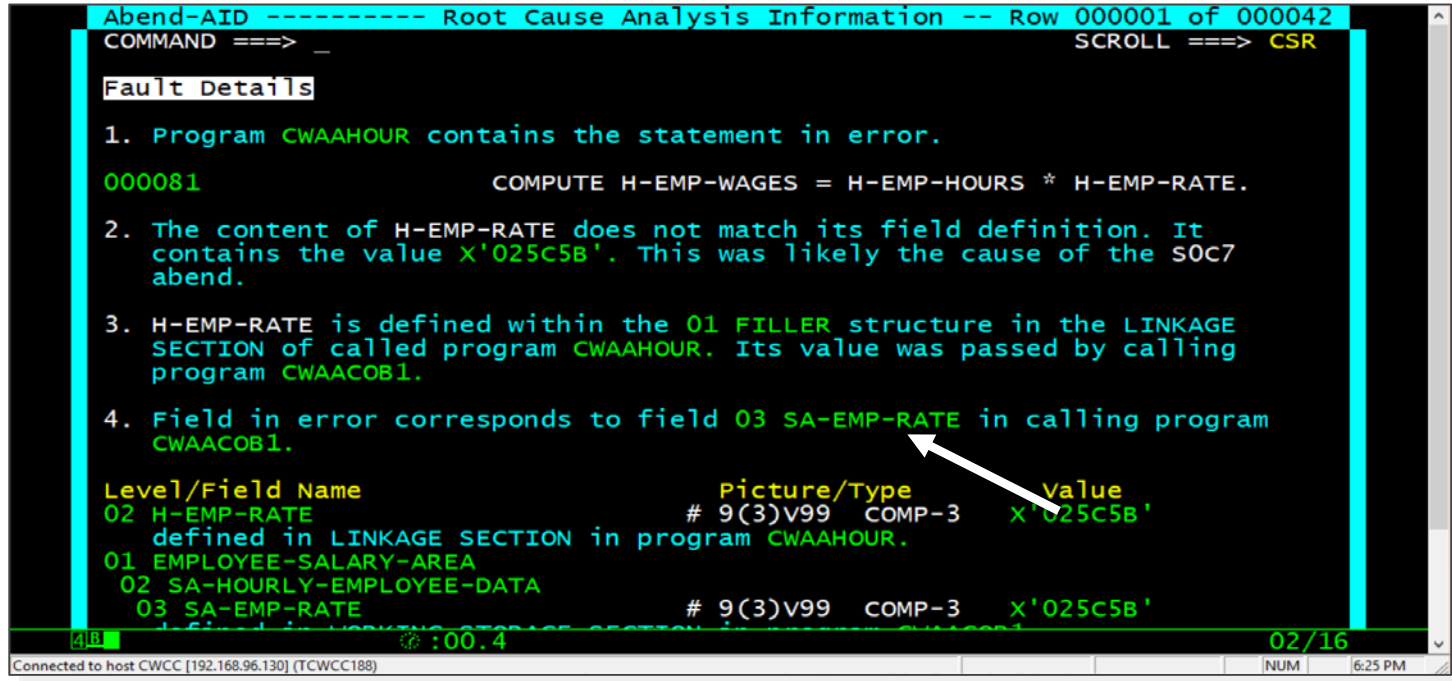
000081          COMPUTE H-EMP-WAGES = H-EMP-HOURS * H-EMP-RATE.

2. The content of H-EMP-RATE does not match its field definition. It
   contains the value X'025C5B'. This was likely the cause of the S0C7
   abend.

3. H-EMP-RATE is defined within the 01 FILLER structure in the LINKAGE
   SECTION of called program CWAACOB1. Its value was passed by calling
   program CWAACOB1.

4. Field in error corresponds to field 03 SA-EMP-RATE in calling program
   CWAACOB1.

Level/Field Name          Picture/Type          Value
02 H-EMP-RATE             # 9(3)V99  COMP-3    X'025C5B'
   defined in LINKAGE SECTION in program CWAACOB1.
01 EMPLOYEE-SALARY-AREA
02 SA-HOURLY-EMPLOYEE-DATA
03 SA-EMP-RATE            # 9(3)V99  COMP-3    X'025C5B'
   defined in LINKAGE SECTION in program CWAACOB1
```



4B :00.4 02/16  
Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 6:25 PM

# EXTENDED SEARCH

# Extended Search

Access Extended Search Listing screen to:

- Search source listing
- Display statements that directly or indirectly modify selected field
- Display data definitions that directly or indirectly reference selected field



# Extended Search

```
COMMAND ==>                                SCROLL ==> CSR
                                             ==>

To display the current Data Locator search criteria, select FINDDATA

D Program Detail                            L Program Listing                        S Program Storage
C Compile Options                          A Program Disassembly                   R Data Locator
P PPT Entry                                I Impact Analysis                       X Extended Search
W COBOL PERFORM FLOW

Load Module   Program   Link Date   Compile Date   Entry Point   Length   Language   Type   EXE Key
*****
- LGICDB01    LGICDB01    21FEB2019  21FEB2019    BAD91650     003186  COBZOS42  LE/370  USE
- LGICUS01    LGICUS01    21MAR2019  21MAR2019    BAD8F810     0011AA  COBZOS42  LE/370  USE
X LGTESTC1    LGTESTC1    21FEB2019  21FEB2019    BADAAAE0     003296  COBZOS42  LE/370  USE
- SSMAP       SSMAP       24MAY2017  24MAY2017    BADAEEA00    0033AA  ASM        COMMAND  USE
*****
***** BOTTOM OF DATA *****
```

# Extended Search

```
COMMAND ==> F WMF-NUM-INPUT_          SCROLL ==> CSR
                                         ==>
Program..... LGTESTC1
F Field Usage Summary      0 other Fields with same value

Source Line
- DATA DIVISION.
- WORKING-STORAGE SECTION.
- 01 LGICDB01                X(8)          LGICDB01
- 01 WS-RESP                 S9(8)          COMP          +16
- 01 WS-ITEM-COUNT           S9(4)          COMP          +16448
- 01 WS-FLAG-TSQH           X                SPACES
- 01 READ-MSG
- 02 READ-MSG-MSG           X(80)          X'40404040404040404040
- 01 FILLER                  REDEFINES READ-MSG
- 02 FILLER                  X(14)          SPACES
- 02 READ-CUST-HIGH         # 9(10)        SPACES
- 01 WS-CUST-HIGH           # S9(10)        SPACES
- 01 WS-CUSTOMER-KEY        # 9(10)          X'D9C8C3C2004040404040
- 01 WRITE-MSG
- 02 WRITE-MSG-E            X(20)          **** GENAPP CNTL
- 02 WRITE-MSG-L            X(13)          LOW CUSTOMER=
- 02 WRITE-MSG-LOW         # 9(10)        SPACES
- 02 FILLER                  X                SPACES
- 02 WRITE-MSG-H            X(14)          HIGH CUSTOMER=
- 02 WRITE-MSG-LTQH        9(10)          0010000001
```

4B :00.1 02/31

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:21 PM



# Extended Search

```
COMMAND ==>>
FDBSI1000I Chars 'WMF-NUM-INPUT' found
Program..... LGTESTC1
                                SCROLL ==>> CSR

F Field Usage Summary          0 other Fields with same value

Source Line
-- 77 MSGEND                    X(24)          Transaction ended
-- 77 WS-EDIT-ERRORS           X(01)          N
-- 77 WS-COUNT                  9(02)         00
-- 01 WS-AREA
-- 02 WS-CUSTOMER-NUM          X(10)          X'20000000000000000000
-- 02 FILLER                    X(215)         X'00000000000004040404
-- 77 F82                       S9(4)         COMP          +225
-- 77 F10                       S9(4)         COMP          +10
-- 77 WS-SUB1                   S9(04)        COMP          +0
-- 77 WS-SUB2                   S9(04)        COMP          +8
-- 01 WMF-NUMERIC-WORK-FIELDS
-- 02 WMF-NUM-ERROR            S9(04)        COMP          +0
-- 02 WMF-NUM-LTH              S9(04)        COMP          +10
-- 02 WMF-NUM-INPUT            X(18)         0001000022
-- 02 WMF-NUM-INPUT-R          REDEFINES WMF-NUM-INPUT
--                               OCCURS 18 TIMES
-- 02 WMF-NUM-INPUT-R(1)       X(01)         0
-- Occurrence (2) thru (3) same as above
-- 02 WMF-NUM-INPUT-R(4)       X(01)         1
-- 02 WMF-NUM-INPUT-R(5)       X(01)         0

4B  :00.1 22/09
Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:22 PM
```

# Extended Search

```
COMMAND ==>>
FDBSI1000I Chars 'WMF-NUM-INPUT' found
Program..... LGTESTC1

F Field Usage Summary      0 Other Fields with same value

Source Line
-- 77 MSGEND                X(24)                Transaction ended
-- 77 WS-EDIT-ERRORS        X(01)                N
-- 77 WS-COUNT              9(02)                00
-- 01 WS-AREA
-- 02 WS-CUSTOMER-NUM       X(10)                X'20000000000000000000
-- 02 FILLER                X(215)              X'00000000000000404040
-- 77 F82                   S9(4) COMP           +225
-- 77 F10                   S9(4) COMP           +10
-- 77 WS-SUB1               S9(04) COMP          +0
-- 77 WS-SUB2               S9(04) COMP          +8
-- 01 WMF-NUMERIC-WORK-FIELDS
-- 02 WMF-NUM-ERROR        S9(04) COMP          +0
-- 02 WMF-NUM-LTH          S9(04) COMP          +10
-- F 02 WMF-NUM-INPUT       X(18)                0001000022
-- 02 WMF-NUM-INPUT-R      REDEFINES WMF-NUM-INPUT
--                               OCCURS 18 TIMES
-- 02 WMF-NUM-INPUT-R(1)   X(01)                0
-- Occurrence (2) thru (3) same as above
-- 02 WMF-NUM-INPUT-R(4)   X(01)                1
-- 02 WMF-NUM-INPUT-R(5)   X(01)                0

41B :00.1 22/05
Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:24 PM
```

# Extended Search

```
COMMAND ==>> _                               SCROLL ==>> CSR

References to the field WMF-NUM-INPUT in program LGTESTC1.

Modifying Statements - Direct

... 1495 LINES EXCLUDED ...
001496      MOVE ENT1CNOO                      TO WMF-NUM-INPUT
... 930 LINES EXCLUDED ...
002427      MOVE ENT1PH1I                      TO WMF-NUM-INPUT
... 19 LINES EXCLUDED ...
002447      MOVE ENT1PH2I                      TO WMF-NUM-INPUT

Remaining lines excluded

Data Definitions, either directly or indirectly

Redefines or group clause referencing the field WMF-NUM-INPUT in program
LGTESTC1.

... 77 LINES EXCLUDED ...
01 WMF-NUMERIC-WORK-FIELDS
... 2 LINES EXCLUDED ...
02 WMF-NUM-INPUT                               x(18)                0001000022

4B  :00.3  02/16
Connected to host CWCC [192.168.96.130] (TCWCC188)  CAP NUM 7:27 PM
```

# Extended Search

```
COMMAND ==> _                               SCROLL ==> CSR
                                             ==>
Program..... LGTESTC1
Program Compile Date.. 21FEB2019           Source Listing Date... 21FEB2019
Program Compile Time.. 08:36:04           Source Listing Time... 08:36:04

To reset display to the abending/last executed statement, select RESET
To reset display to the point of entry into this listing, select ENTRY

Source Line
*****
001496          MOVE ENT1CNOO                TO WMF-NUM-INPUT
001497
001498          PERFORM P70500-EDIT-NUMERIC-FIELD
001499              THRU P70500-EDIT-NUMERIC-FIELD-EXIT.
001500
001501          IF WMF-NUM-ERROR                > ZEROES
001502      1          MOVE -1                    TO ENT1CNOL
001503      1          MOVE DFHBMFSE            TO ENT1CNOA
001504      1          GO TO ER-CUSTOMER.
001505
001506
001507          MOVE WMF-NUM-OUTPUT              TO WMF-NUM-OUTPUT-910.
001508          MOVE WMF-NUM-OUTPUT-910        TO ENT1CNOO
001509                                          CA-CUSTOMER-NUM.
001510
001511
```

4B :00.3 02/16

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:29 PM

# Extended Search

```
COMMAND ==>                                SCROLL ==> CSR
                                             ==>
Program..... LGTESTC1
Program Compile Date.. 21FEB2019           Source Listing Date.. 21FEB2019
Program Compile Time.. 08:36:04           Source Listing Time.. 08:36:04

To reset display to the abending/last executed statement, select RESET
To reset display to the point of entry into this listing, select ENTRY

Source Line
*****
p01496          MOVE ENT1CNOO              TO WMF-NUM-INPUT
001497
001498          PERFORM P70500-EDIT-NUMERIC-FIELD
001499              THRU P70500-EDIT-NUMERIC-FIELD-EXIT.
001500
001501          IF WMF-NUM-ERROR              > ZEROES
001502      1          MOVE -1                  TO ENT1CNOL
001503      1          MOVE DFHBMFSE          TO ENT1CNOA
001504      1          GO TO ER-CUSTOMER.
001505
001506
001507          MOVE WMF-NUM-OUTPUT            TO WMF-NUM-OUTPUT-910.
001508          MOVE WMF-NUM-OUTPUT-910      TO ENT1CNOO
001509              CA-CUSTOMER-NUM.
001510
001511
```

4B :00.3 13/04

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:30 PM

# Extended Search

```
COMMAND ==> _                               SCROLL ==> CSR
Source Line
*****
02 ENT1CNOO          X(10)          0001000022
02 FILLER           X(3)           LOW-VALUES
02 ENT1DATO         X(13)          LOW-VALUES
02 FILLER           X(3)          X'000A00'
02 ENT1FNAO         X(10)          JIM
02 FILLER           X(3)          X'001400'
02 ENT1ILNAO        X(20)          SMITHSON
02 FILLER           X(3)          X'000A00'
02 ENT1DOBO         X(10)          1950-12-01
02 FILLER           X(3)          X'001400'
02 ENT1NINO         X(20)          SPACES
02 FILLER           X(3)          X'000200'
02 ENT1TYPO         X(2)           SPACES
02 FILLER           X(3)          X'001E00'
02 ENT1STRO         X(30)          SPACES
02 FILLER           X(3)          X'001400'
02 ENT1CITO         X(20)          SPACES
02 FILLER           X(3)          X'000200'
02 ENT1STAO         X(2)           SPACES
02 FILLER           X(3)          X'000300'
02 ENT1COUO         X(3)           SPACES
02 FILLER           X(3)          X'000800'
02 ENT1R000        X(3)          12345
*****
4B :00.3 02/16
Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:31 PM
```

# Extended Search

```
COMMAND ==>                                SCROLL ==> CSR

References to the field WMF-NUM-INPUT in program LGTESTC1.

Modifying Statements - Direct

... 1495 LINES EXCLUDED ...
001496      MOVE ENT1CNOO                TO WMF-NUM-INPUT
... 930 LINES EXCLUDED ...
002427      MOVE ENT1PH1I                TO WMF-NUM-INPUT
... 19 LINES EXCLUDED ...
002447      MOVE ENT1PH2I                TO WMF-NUM-INPUT

Remaining lines excluded

Data Definitions, either directly or indirectly

Redefines or group clause referencing the field WMF-NUM-INPUT in program
LGTESTC1.

... 77 LINES EXCLUDED ...
01 WMF-NUMERIC-WORK-FIELDS
... 2 LINES EXCLUDED ...
02 WMF-NUM-INPUT                        X(18)                0001000022

Remaining lines excluded

4B  :00.1  12/03
Connected to host CWCC [192.168.96.130] (TCWCC188)  CAP NUM | 7:32 PM
```

# Extended Search

```
COMMAND ==>>                                SCROLL ==> CSR
                                                ==>
Program..... LGTESTC1
Program Compile Date.. 21FEB2019           Source Listing Date... 21FEB2019
Program Compile Time.. 08:36:04           Source Listing Time... 08:36:04

To reset display to the abending/last executed statement, select RESET
To reset display to the point of entry into this listing, select ENTRY

Source Line
*****
P02427                MOVE ENT1PH1I                TO WMF-NUM-INPUT
002428
002429                PERFORM P70500-EDIT-NUMERIC-FIELD
002430                    THRU P70500-EDIT-NUMERIC-FIELD-EXIT.
002431
002432                IF WMF-NUM-ERROR                > ZEROES
002433                1      MOVE 'Y'                TO WS-EDIT-ERRORS
002434                1      MOVE DFHBMFSE            TO ENT1CNOA
002435                1      GO TO ER-PHONE-HOME.
002436
002437
002438                MOVE WMF-NUM-OUTPUT            TO WMF-NUM-OUTPUT-910
002439                MOVE WMF-NUM-OUTPUT-910        TO ENT1PH10.
002440
002441
002442
*****
4B :00.3 13/04
```

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:33 PM



# Extended Search

```
COMMAND ==> _                               SCROLL ==> CSR
Source Line
*****
02 ENT1PH1I          X(10)          999 888777
02 ENT1PH2L          S9(4)         COMP      +10
02 ENT1PH2F          X              LOW-VALUES
02 FILLER            REDEFINES ENT1PH2F
03 ENT1PH2A          X              LOW-VALUES
02 ENT1PH2I          X(10)          666 555444
02 ENT1EMAL          S9(4)         COMP      +25
02 ENT1EMAF          X              LOW-VALUES
02 FILLER            REDEFINES ENT1EMAF
03 ENT1EMAA          X              LOW-VALUES
02 ENT1EMAI          X(25)          JIM@WORK.COM
02 ERRFLDL          S9(4)         COMP      +0
02 ERRFLDF          X              LOW-VALUES
02 FILLER            REDEFINES ERRFLDF
03 ERRFLDA          X              LOW-VALUES
02 ERRFLDI          X(40)          LOW-VALUES
01 SSMAPC1O          REDEFINES SSMAPC1I
02 FILLER            X(12)          X'4040404040404001324
02 FILLER            X(3)           LOW-VALUES
02 ENT1CDTO          X(10)          2019-05-21
02 FILLER            X(3)           X'000100'
02 ENT1OPTO          X(1)           1
02 FILLER            X(3)           X'000100'
```

4B :00.3 02/16

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:34 PM

# Extended Search

```
COMMAND ==>>                                SCROLL ==>> CSR
References to the field WMF-NUM-INPUT in program LGTESTC1.
Modifying Statements - Direct
... 1495 LINES EXCLUDED ...
001496      MOVE ENT1CNOO                TO WMF-NUM-INPUT
... 930 LINES EXCLUDED ...
002427      MOVE ENT1PH1I                TO WMF-NUM-INPUT
... 19 LINES EXCLUDED ...
002447      MOVE ENT1PH2I                TO WMF-NUM-INPUT
Remaining lines excluded
Data Definitions, either directly or indirectly
Redefines or group clause referencing the field WMF-NUM-INPUT in program
LGTESTC1.
... 77 LINES EXCLUDED ...
01 WMF-NUMERIC-WORK-FIELDS
... 2 LINES EXCLUDED ...
02 WMF-NUM-INPUT                        X(18)                0001000022
4B :00.1                                14/03
Connected to host CWCC [192.168.96.130] (TCWCC188)  CAP NUM 7:35 PM
```

# Extended Search

```
COMMAND ==>                                SCROLL ==> CSR
                                                ==>
Program..... LGTESTC1
Program Compile Date.. 21FEB2019           Source Listing Date.. 21FEB2019
Program Compile Time.. 08:36:04           Source Listing Time.. 08:36:04

To reset display to the abending/last executed statement, select RESET
To reset display to the point of entry into this listing, select ENTRY

Source Line
*****
002447          MOVE ENT1PH2I              TO WMF-NUM-INPUT
002448
002449          PERFORM P70500-EDIT-NUMERIC-FIELD
002450              THRU P70500-EDIT-NUMERIC-FIELD-EXIT.
002451
002452          IF WMF-NUM-ERROR                > ZEROES
002453      1          MOVE 'Y'                  TO WS-EDIT-ERRORS
002454      1          MOVE DFHBMFSE            TO ENT1CNOA
002455      1          GO TO ER-PHONE-MOBILE.
002456
002457
002458          MOVE WMF-NUM-OUTPUT              TO WMF-NUM-OUTPUT-910
002459          MOVE WMF-NUM-OUTPUT-910        TO ENT1PH20.
002460
002461
002462
*****
41B  :00.4 13/04
Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:36 PM
```

# Extended Search

```
COMMAND ==> _                               SCROLL ==> CSR
                                             ==>
Source Line
*****
02 ENT1PH2I          X(10)          666 555444
02 ENT1EMAL          S9(4)          COMP      +25
02 ENT1EMAF          X              LOW-VALUES
02 FILLER            REDEFINES ENT1EMAF
03 ENT1EMAA          X              LOW-VALUES
02 ENT1EMAI          X(25)          JIM@WORK.COM
02 ERRFLDL           S9(4)          COMP      +0
02 ERRFLDF           X              LOW-VALUES
02 FILLER            REDEFINES ERRFLDF
03 ERRFLDA          X              LOW-VALUES
02 ERRFLDI           X(40)          LOW-VALUES
01 SSMAPC10          REDEFINES SSMAPC1I
02 FILLER            X(12)          X'4040404040404001324
02 FILLER            X(3)           LOW-VALUES
02 ENT1CDTO          X(10)          2019-05-21
02 FILLER            X(3)           X'000100'
02 ENT1OPTO          X(1)           1
02 FILLER            X(3)           X'000A00'
02 ENT1CN00          X(10)          0001000022
02 FILLER            X(3)           LOW-VALUES
02 ENT1DATO          X(13)          LOW-VALUES
02 FILLER            X(3)           X'000A00'
02 ENT1EMAF          X(10)          333
```

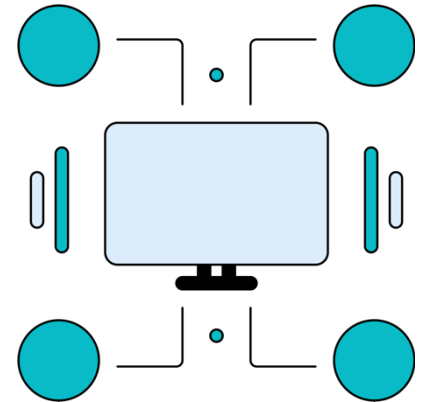
4B :00.3 02/16

Connected to host CWCC [192.168.96.130] (TCWCC188) CAP NUM 7:36 PM

# COBOL PERFORM FLOW

# COBOL Perform Flow

- COBOL Perform save cells enhancement
- New COBOL Perform Flow screen shows flow through COBOL program that occurred prior to abend or flow prior to call for calling programs
- Feature is for Enterprise COBOL only
- Requires DDIO listing to have been processed with LIST and NOOPT compiler options



# Perform Save Cell Support

```
OPTION ==> _  
  
1  DIAG Diagnostic Summary          5  *DB2 DB2 Information  
2  PROG Program Information        6  *IDMS IDMS Information  
3  FILE File Summary              7  *MQINFO Websphere MQ Information  
4  *IMS IMS Information            8  LEINFO LE Information  
  
D  DIRECTRY Abend-AID Directory    R  SRCDIR Source Directory  
S  SUMMARY Fault Summary          U  USER User Control Facility  
I  IMPORT SVC Dump Import         C  CSSUTIL CSS Utilities  
N  NEWS Product News              X  EXIT Exit  
  
4B :00.1 02/16  
Connected to host CWCC [192.168.96.130] (TCWCC188) NUM 7:57 PM
```

# Perform Save Cell Support

```
COMMAND ==> _                                     SCROLL ==> CSR
                                                    ==>
To display the current Data Locator search criteria, select FINDDATA

 D Program Detail           L Program Listing         S Program Storage
 C Compiler Options        R Data Locator           X Extended Search
 I Impact Analysis        W COBOL PERFORM Flow

*****
Program / Procedure Name      Load      Length  Language      Compil
                             Module                    Date
*****
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAASHOUR                   CWAASHOUR 000C18  COBOL for z/OS 08JUL2
- CWAADATE                    CWAASHOUR 000AF0  COBOL for z/OS 08JUL2
***** BOTTOM OF DATA *****
```

4B

:00.1

02/16



# Perform Save Cell Support

```
COMMAND ==>                                SCROLL ==> CSR
                                             ==>

To display the current Data Locator search criteria, select FINDDATA

D Program Detail          L Program Listing          S Program Storage
C Compiler Options       R Data Locator             X Extended Search
I Impact Analysis        W COBOL PERFORM FLOW

Program / Procedure Name      Load      Length  Language      Compil
*****                      Module    *****  *****      Date
W CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
- CWAACOB1                    CWAACOB1  003098  COBOL for z/OS 08JUL2
*****                      BOTTOM OF DATA *****
```

4B :00.1 13/05

# Perform Save Cell Support

```
COMMAND ==>                                SCROLL ==> CSR
                                         ==>
Source Program Name... CWAACOB1
Program Compile Date.. 08JUL2019           Source Listing Date... 08JUL2019
Program Compile Time.. 14:08:11           Source Listing Time... 14:08:11

To display the last call statement select LAST CALL
To display the initial entry into this listing, select ENTRY

Source Line      Active PERFORM PROCEDURE statements
*****
000367           PERFORM 1000-PROCESS-DATA
000384           PERFORM 2000-PROCESS-HOURLY
-----
CWAACOB1         SOURCE LISTING LAST CALL STATEMENTS FOLLOW
-----
000358           PROCEDURE DIVISION USING PARMINFO.
000359           0000-MAINLINE.
000360           PERFORM 9000-OPEN.
000361           PERFORM 9100-CHECK-PARM.
000362           IF GOOD-PARM
000363             PERFORM 9200-INIT
000364             PERFORM 8000-READ-INPUT
000365             UNTIL RECORDS-READ = START-NUMBER
000366             OR END-OF-FILE
000367           PERFORM 1000-PROCESS-DATA
000368           UNTIL END-OF-FILE

4B  :00.2  20/37
```

# Perform Save Cell Support

```
COMMAND ==>                                SCROLL ==> CSR
                                         ==>

Source Program Name... CWAACOB1
Program Compile Date.. 08JUL2019          Source Listing Date... 08JUL2019
Program Compile Time.. 14:08:11          Source Listing Time... 14:08:11

To display the last call statement select LAST CALL
To display the initial entry into this listing, select ENTRY

Source Line      Active PERFORM PROCEDURE statements
*****
000364          PERFORM 8000-READ-INPUT
000365              UNTIL RECORDS-READ = START-NUMBER
000366              OR END-OF-FILE
000367          PERFORM 1000-PROCESS-DATA
000368              UNTIL END-OF-FILE
000369          PERFORM 6000-PRINT-EMPLOYEE-REPORT
000370          MOVE 1 TO REGION-SUB
000371          IF END-OF-MONTH
000372              PERFORM 7000-PRINT-REGION-REPORT
000373              UNTIL REGION-SUB > 4.
000374          PERFORM 9900-CLOSE.
000375          GOBACK.
000376          *****
000377          *****
000378          *****
000379          *****
000380          *****
```

4B

:00.5

13/03

# Perform Save Cell Support

```
COMMAND ==>                               SCROLL ==> CSR
                                         ==>
Source Program Name... CWAACOB1
Program Compile Date.. 08JUL2019           Source Listing Date... 08JUL2019
Program Compile Time.. 14:08:11           Source Listing Time... 14:08:11

To display the last call statement select LAST CALL
To display the initial entry into this listing, select ENTRY

Source Line      Active PERFORM PROCEDURE statements
*****
000405          WRITE REPORT-RECORD FROM ERROR-LINE.
000406          *
000407          MOVE ZERO TO OT-AMOUNT.
000408          CALL CWAACOHOUR USING EMP-WAGES,
000409                               SA-EMP-RATE,
000410                               SA-EMP-HOURS,
000411                               OT-HOURS,
000412                               OT-AMOUNT,
000413                               EMP-COMPENSATION,
000414                               END-OF-MONTH-SW,
000415                               ANNIVERSARY-IND,
000416                               TODAYS-DATE,
000417                               WA-EMP-HIRE-DATE.
000418          ADD EMP-COMPENSATION TO GRAND-TOTAL-EMP.
000419          PERFORM 5000-STORE-EMPLOYEE-DETAIL.
000420          SET HOLD BY UP BY 1

4B  :00.2  08/45
```

# Perform Save Cell Support

```
COMMAND ==> _                               SCROLL ==> CSR
                                         ==>

Source Program Name... CWAASHOUR
Program Compile Date.. 08JUL2019           Source Listing Date.. 08JUL2019
Program Compile Time.. 14:08:15           Source Listing Time.. 14:08:15

To display the abending statement select ABEND STMT
To display the initial entry into this listing, select ENTRY

Source Line      Active PERFORM PROCEDURE statements
*****
No PERFORM statements found
-----
CWAASHOUR                SOURCE LISTING STATEMENTS AT TIME OF ABEND
-----
000039      PROCEDURE DIVISION USING H-EMP-WAGES,
000040                                H-EMP-RATE-INFO,
000041                                H-EMP-HOURS,
000042                                H-OT-HOURS,
000043                                H-OT-AMOUNT,
000044                                H-EMP-COMPENSATION,
000045                                H-END-OF-MONTH-SW,
000046                                H-ANNIVERSARY-IND,
000047                                H-TODAYS-DATE
000048                                H-EMP-HIRE-DATE.
000049      0000-MAINLINE.
000050      ADD 1 TO HOURLY-RECORDS-PROCESSOR
-----
4B  :00.3 02/16
```

# Perform Save Cell Support

```
COMMAND ==>                                SCROLL ==> CSR
                                         ==>

Source Program Name... CWAACHOUR
Program Compile Date.. 08JUL2019           Source Listing Date... 08JUL2019
Program Compile Time.. 14:08:15           Source Listing Time... 14:08:15

To display the abending statement select ABEND STMT
To display the initial entry into this listing, select ENTRY

Source Line      Active PERFORM PROCEDURE statements
*****
000078          COMPUTE H-OT-HOURS  = H-EMP-HOURS - 40
000079          COMPUTE H-OT-AMOUNT = H-OT-HOURS * (H-EMP-RATE * 1.5)
000080          ELSE
000081          COMPUTE H-EMP-WAGES  = H-EMP-HOURS * H-EMP-RATE.
000082          COMPUTE H-EMP-COMPENSATION = H-EMP-WAGES + H-OT-AMOUNT.
***** BOTTOM OF DATA *****

4B  :00.1  08/45
```

# FILE-AID INTEGRATION

# File-AID Integration (New)

- If users have security rights to access files used in job that abended, jump directly to File-AID from within Abend-AID
- From Abend-AID for Batch:
  - File Section: File-AID for MVS
  - Db2 Section: File-AID for DB2
  - IMS Section: File-AID for IMS





# File-AID for MVS

```

Abend-AID ----- File Summary ----- Row 000001 of 000005
COMMAND ==> SCROLL ==> CSR
==>

R Record Image      D File Detail      I SMS Information
E File-AID Edit     B File-AID Browse

      DDNAME      Device      Unit  VolSer  Disposition  Access  EXCPs  DSORG
      * * * * *  * * * * *  * * *  * * * *  * * * * *  * * * *  * * * * *  * * * *
-  SYSOUT      JES2 Spooled  2601  SPL01D  MOD          QSAM          39  PS
-  REGREPRT    3390          20BD  PRD952  SHR          QSAM           5  PS
-  SAL FILE    3390          20A8  PRD942  OLD          QSAM           2  PS
b EMPFILE    3390          20D5  PRD968  SHR          VSAM           2
-  SYSPRINT                                Not Open
-  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * * *  * * * *
      BOTTOM OF DATA * * * * *
  
```

4B

:00.1

13/04

# File-AID for MVS

```
File-AID - Browse - FMSSP.CWTESTC4.EMPFILE -----
COMMAND ==> fmt                                SCROLL ==> CSR
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----
01321 H5JOHN LAWRENCE 123 NORTH AVE PLANO TX57010 06258400
01343 H3JAMES MORRISON 11-A MAPLE AVE SYRACUSE NY12123 09136901
01568 H4THOMAS LONG 12 RACE STREET SAN JOSE CA95126 03318704
02010 S2MICHAEL DAYTON 11 UNION STREET ORLANDO FL18222 08308404
02136 M4SAM MILLS 13 SUTTON BLVD WALNUT CA90066 03179002
02171 H4SAMUEL ADDAMS 900 LINCOLN CT RENO NV82433 01027406
02334 S1ROY GARDNER 323 OAK STREET EDINA MN23040 12316803
02523 H1JOHN SMITH 5456 ELM STREET WAYNE IL77902 10158103
03215 S4MARK JOHNSON 12 HOBART ROAD PHOENIX AZ31234 09307700
03241 H3MARCIA SULLIVAN 55 SOUTH STREET NEW YORK NY10017 04059304
04147 S3LAURA MARTIN TWO ENDERBY ST BETHESDA MD62045 & 7500000 06146401
05213 S2DENNIS WHITE 47 CARROLL PL MIAMI FL87021 2800000 02298803
06745 S3VALERIE OLSEN 720 RATZER ROAD WAYNE NJ87010 7000000 05019401
***** BOTTOM OF DATA *****-CAPS OFF-*

4B | :00.1 | 02/18
```

# File-AID for MVS

```
File-AID ----- Record Layout Specification ----- NO LAYOUT EXISTS
COMMAND ==>

Specify Record Layout and XREF Information:
Record layout usage    ==> s _      (S = Single; X = XREF)

Record layout dataset ==> 'SUUSDGK0.TSO.LIB'
Member name           ==> EMPLOYEE (Blank or pattern for member list)

XREF dataset name     ==>
Member name           ==>          (Blank or pattern for member list)

4B █                               :00.1                               05/34
```

# File-AID for MVS

```
File-AID - Browse - FMSSP.CWTESTC4.EMPFILE ----- FS738-LAYOUT LOADED
COMMAND ===>                                     SCROLL ==> CSR
RECORD:      8                                     EMPLOYEE-WORK-AREA          LENGTH:      80
---- FIELD LEVEL/NAME ----- -FORMAT- -----+-----1-----+-----2-----+-----3-----+-----4
5 WA-EMP-NUM          5/NUM  1321
5 WA-EMP-TYPE         1/AN   H
5 WA-EMP-REGION       1/NUM   5
5 WA-EMP-NAME        15/AN  JOHN LAWRENCE
5 WA-EMP-ADDRESS     34/GRP
  10 WA-EMP-STREET   15/AN  123 NORTH AVE
  10 WA-EMP-CITY     8/AN   PLANO
  10 WA-EMP-STATE    2/AN   TX
  10 WA-EMP-ZIP      9/AN  57010
5 FILLER             13/AN
5 WA-EMP-HIRE-DATE   6/GRP
  10 WA-EMP-HIRE-MONTH 2/NUM  6
  10 WA-EMP-HIRE-DAY  2/NUM  25
  10 WA-EMP-HIRE-YEAR 2/NUM  84
5 WA-EMP-BONUS       2/AN   00
5 FILLER             3/AN
*****
***** BOTTOM OF DATA *****
4B | :00.2 | ^ | 02/15
```

# File-AID for DB2

```
OPTION ==> 8_
1  DIAG Diagnostic Summary      7  *FILE File Request Summary
2  PROG Program Information     8  DB2 DB2 Information
3  TRACE CICS Trace            9  L3270 Last 3270 Screen
4  TERM Terminal Detail        10 *MQINFO WebSphere MQ Information
5  TASK Task Detail            11 *CWI CICS Web Interface
6  CB Control Blocks/Storage   12 LEINFO LE Information

D  DIRECTRY Abend-AID Directory  R  SRCDIR Source Directory
S  SUMMARY Fault Summary        U  USER User Control Facility
N  NEWS Product News           X  EXIT Exit
```

4B :00.1 02/17

# File-AID for DB2

```
COMMAND ==> 9_
DB2 Release..... 11.1.0           Subsystem ID..... DBCC
Authorization ID.. HUSDRNO         Attach Mode..... CICS

1  DIAG Diagnostic Summary      5  COLSREF Columns Referenced
2  HOSTVAR Host Variables        6  DEPN Dependencies
3  BIND Bind Information          7  SQLCA SQL Communications Area
4  PRECOMP Precompile Information  8  RCT RCT Detail
                                   9  FDB2 File-AID DB2
```

4B :00.1 02/17

# File-AID for DB2

```
COMMAND ==> SCROLL ==> CSR
SSID..... DBCC
B Browse   E Edit
Creator ID Table/View Name Location
*****
b GENAPPDB CUSTOMER
***** BOTTOM OF DATA *****
4B :00.1 10/05
```

# File-AID for DB2

```
File-AID for DB2 ----- BROWSE Selection Template ----- Row 1 to 17 of 17
COMMAND ==> SQL_                                     SCROLL ==> PAGE
                                                    SSID: DBCC

Use EXEC to continue; SQL to view/edit SQL; SAVE ; SIZE
Table Name: GENAPPDB.CUSTOMER
Max Rows to select ==> 2000          (* = ALL ROWS)

SEL  COLUMN NAME          TYPE(LEN)          ORDER (A/D)  WHERE          More: >
---  -
S__  CUSTOMERNUMBER      INTEGER           > 1000100
S__  FIRSTNAME           CHAR(10)
S__  LASTNAME            CHAR(20)
___  DATEOFBIRTH         DATE
___  HOUSENAME           CHAR(20)
___  HOUSENUMBER         CHAR(4)
___  POSTCODE            CHAR(8)
___  PHONEHOME           CHAR(20)
___  PHONEMOBILE         CHAR(20)
___  EMAILADDRESS        CHAR(100)
___  NATIONALIDNBR       CHAR(20)
___  NINTYPE              CHAR(2)
___  STREETADDRESS       CHAR(30)
___  CITY                 CHAR(20)
___  STATE                CHAR(2)
___  COUNTRYCODE         CHAR(3)
___  SALESTERRITORY      CHAR(5)

4B  :00.1  02/18
```



# File-AID for DB2

```
EDIT ---- SUSDGK0.SYS19189.T210541.SHOW.SQL ----- Columns 001 072
COMMAND ==> SCROLL ==> CSR
***** ***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
000001  SELECT CUSTOMERNUMBER, FIRSTNAME, LASTNAME
000002  FROM GENAPPDB.CUSTOMER
000003  WHERE CUSTOMERNUMBER > 1000100
000004  FETCH FIRST 2000 ROWS ONLY;
***** ***** Bottom of Data *****
```

4B | :00.1 | 02/15

# File-AID for DB2

```
File-AID for DB2 ----- SQL Entry Panel ----- SSID: DBCC
COMMAND ==> _

Specify Input Dataset Name:
  Criteria Dataset Name ==> SUSDGK0.SYS19189.T210541.SHOW.SQL
  Member                ==>

Specify Processing Options:
  Maximum Rows to select ==> 2000
  Edit SQL                ==> YES      (YES - Edit dataset,
                                       NO  - Execute SQL immediately)

4B  :00.1  02/15
```

# File-AID for DB2

```
File Edit View Options Open Menu Utilities Help
-----
File-AID for DB2 Browse GENAPPDB.CUSTOMER 125 rows fetched
COMMAND ==> SCROLL ==> PAGE
CUSTOMERNUMBER FIRSTNAME LASTNAME
INTEGER CHAR(10) CHAR(20)
-----PRIM+ID -----
***** TOP OF DATA *****
000001 1000101 JOE SMITH
000002 1000102 SCOTT TRACEY
000003 1000103 SCOTT TRACEY
000004 1000104 SCOTT TRACEY
000005 1000105 SCOTT TRACEY
000006 1000121 SCOTT TRACEY
000007 1000122 NANCY SMAITH
000008 1000141 LOUIE PUG
000009 1000142 LOUIE PUG
000010 1000143 FNAME LNAME
000011 1000144 ANDREW PANDY
000012 1000145 Peters Richard
000013 1000146 SANDERS COLONEL
000014 1000147 GAGA LADY
000015 1000148 JOHN SMITH
000016 1000149 JOE SMITH
000017 1000161 FIRST1111Z LAST11111111111111Z
000018 1000162 SCOTT TRACEY
000019 1000163 SCOTT TRACEY
-----
4B :00.1 04/15
```

# File-AID for DB2

```
File-AID for DB2 ----- BROWSE selection Template ----- Row 1 to 17 of 17
COMMAND ==> EXEC                                     SCROLL ==> PAGE
                                                    SSID: DBCC

Use EXEC to continue; SQL to view/edit SQL; SAVE ; SIZE
Table Name: GENAPADB.CUSTOMER
Max Rows to Select ==> 2000          (* = ALL ROWS)

SEL  COLUMN NAME          TYPE(LEN)          ORDER (A/D)  WHERE          More: >
-----
S__  CUSTOMERNUMBER      INTEGER           > 1000100
S__  FIRSTNAME           CHAR(10)
S__  LASTNAME            CHAR(20)
___  DATEOFBIRTH         DATE
___  HOUSENAME           CHAR(20)
___  HOUSENUMBER         CHAR(4)
___  POSTCODE            CHAR(8)
___  PHONEHOME           CHAR(20)
___  PHONEMOBILE         CHAR(20)
___  EMAILADDRESS        CHAR(100)
___  NATIONALIDNBR       CHAR(20)
___  NINTYPE              CHAR(2)
___  STREETADDRESS       CHAR(30)
___  CITY                 CHAR(20)
___  STATE                CHAR(2)
___  COUNTRYCODE         CHAR(3)
___  SALESTERRITORY      CHAR(5)

4B  :00.1  02/15
```

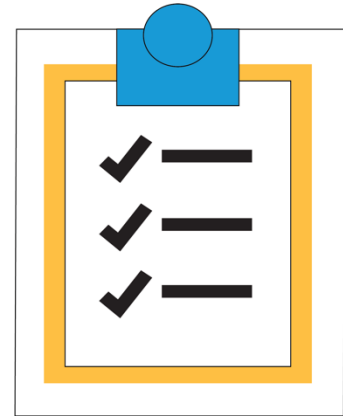
# File-AID for DB2

```
File Edit View Options Open Menu Utilities Help
-----
File-AID for DB2 Browse GENAPPDB.CUSTOMER 125 rows fetched
COMMAND ==> SCROLL ==> PAGE
CUSTOMERNUMBER FIRSTNAME LASTNAME
INTEGER CHAR(10) CHAR(20)
-----PRIM+ID -----
***** TOP OF DATA *****
000001 1000101 JOE SMITH
000002 1000102 SCOTT TRACEY
000003 1000103 SCOTT TRACEY
000004 1000104 SCOTT TRACEY
000005 1000105 SCOTT TRACEY
000006 1000121 SCOTT TRACEY
000007 1000122 NANCY SMAITH
000008 1000141 LOUIE PUG
000009 1000142 LOUIE PUG
000010 1000143 FNAME LNAME
000011 1000144 ANDREW PANDY
000012 1000145 Peters Richard
000013 1000146 SANDERS COLONEL
000014 1000147 GAGA LADY
000015 1000148 JOHN SMITH
000016 1000149 JOE SMITH
000017 1000161 FIRST1111Z LAST1111111111111111Z
000018 1000162 SCOTT TRACEY
000019 1000163 FRTS NTEST
4B 00:00.1 04/15
```

# ARRANGE COMMAND IN VIEWER

# ARRANGE Command

- Customize report directory to match requirements through ARRANGE command
- With this command:
  - Move columns before and after other columns
  - Lock columns to appear on every screen when scrolling
  - Hide columns from view



# ARRANGE Command

```

Abend-AID ----- Directory - Batch ----- Row 000295 of 000326
COMMAND ==>                                     SCROLL ==> CSR
                                                ==>

Shared Directory/Database... SYS2.CPWR.AA.REPORT.SHRDIR
For a l |----- Row 00001 of 00016 -----|
        |          Arrange column order          |
M Menu  | COMMAND ==> █ |
S Diag  | M Move column   A After this column   B Before this column |
        | L Lock/unlock column   H Hide/unhide column |
        |-----|
Entry   | Column Heading | Status | Date |
****   |-----|-----|-----|-----|
01752  | Job Name       | Locked | 0APR201 |
01743  | Abend Code     |       | 3MAR201 |
01743  | Status        |       | 3MAR201 |
01743  | JESID         |       | 3MAR201 |
01743  | Program       |       | 3MAR201 |
01728  |               |       | 4FEB201 |
01707  | Type END (or press PF3) to save your changes, or CANCEL to | 4JAN201 |
01707  | exit without saving, or RESET to restore the defaults. | 4JAN201 |
01707  | Help=PF01     End=PF03                               More... | 1JAN201 |
01702  |-----|-----|-----|-----|
0170192 $75XLSA4 S0C7          LOCKED          J0747528 CWAADATE 00000052 12:22 18JAN201
Type a line command and press Enter to process it

```



# USING SNAPPAID

# Invoking Abend-AID If Application Does Not Abend

- Some applications handle error conditions so they don't abend
  - No Abend-AID report will be generated
- Abend-AID reports can be generated in other ways
  - Batch: Xpediter through 'AA SNAP command'
  - Batch: Abend-AID through Call SNAP AID
  - CICS: EXEC CICS DUMP command outside of handle condition
  - Xpediter/CICS - =7.1 option



# SNAPAID

- Used in Db2 stored procedures, WebSphere MQ and any batch application where program is not coded to abend when failing condition occurs
- Generate Abend-AID diagnostic report without terminating app
- Should be invoked prior to any ROLLBACK or COMMIT commands



# SNAP AID

Copybook PRMICBL needs to be copied from Abend-AID sample library and added to your copy library

- Contact tech support
- Edit copybook and change following parameter before adding to your copy library:

**03 DYNALC-REQ      PIC X      VALUE 'SPACE'**

- Change value from SPACE to 'D'

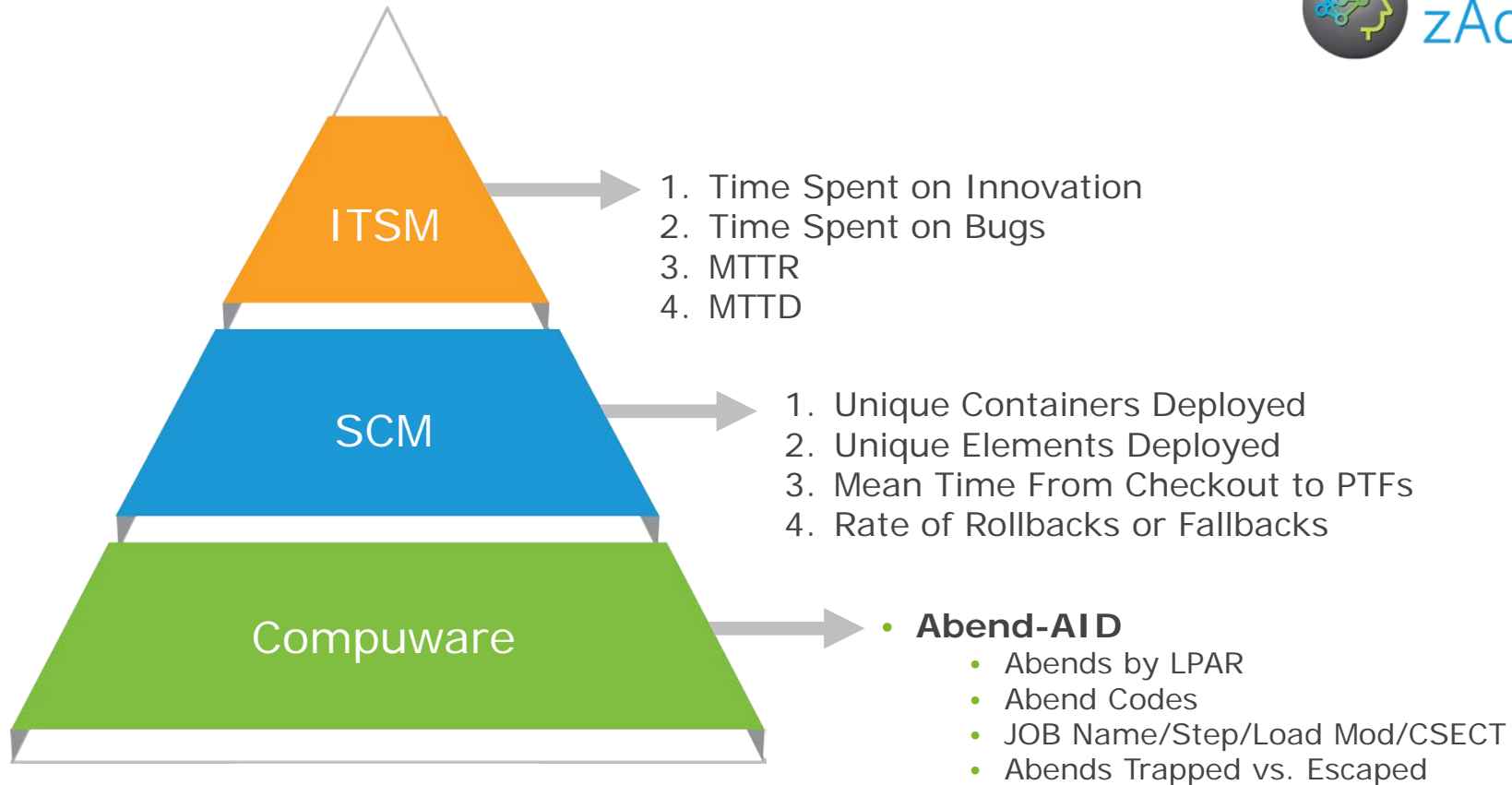
# SNAP-AID

```
01 PARM-INTERFACE    COPY PRMICBL.  
01   SNAPAID        PIC X(08) VALUE 'SNAPAID'.
```

Insert the following code before you issue  
The call to the abend routine or issue a  
ROLLBACK:

```
CALL SNAPAID USING PARM-INTERFACE  
ON OVERFLOW  
CONTINUE  
END-CALL.
```

# zADVISER



# Data Sources

KPIs originate from:

## Source Control Management (SCM)



CA Endevor®



## IT Service Management (ITSM)

Project/Problem Management Tool



servicenow™

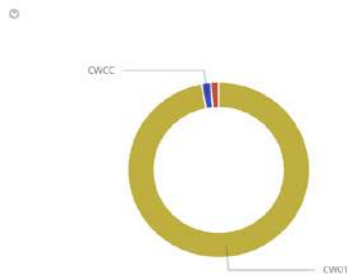


## Compuware Product Usage

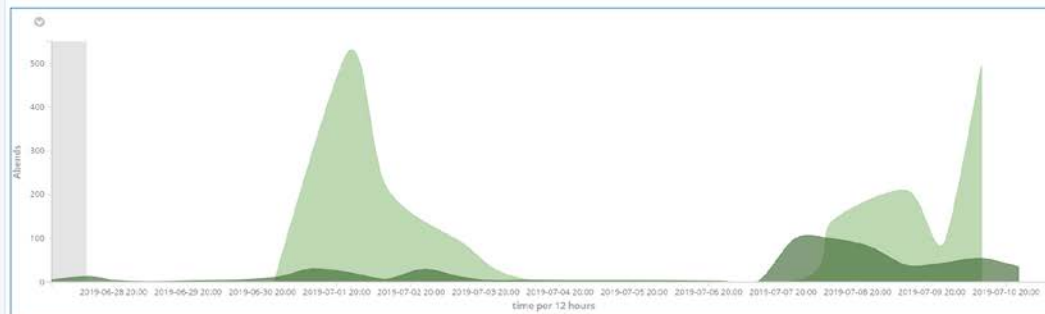




Abends by LPAR



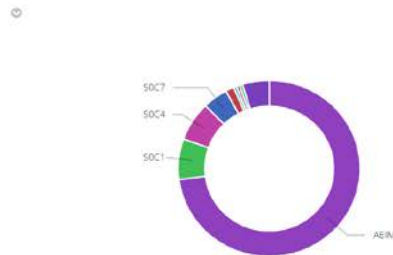
Trend of Abends



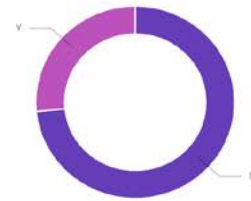
Abends by Type



Abend Codes



Viewer Source Support



Abends

Sysplex	LPAR	Job	Step	CICS Tran	Load Module	CSECT	Abend	Count
PRODPLEX	CW01	XXXXXXXX	GO	Batch Abend	ONION	ONION	SOC1	88
PRODPLEX	CW01	XXXXXXXX	GO	Batch Abend	ONION	ONION	SOC7	50
PRODPLEX	CW01	XXXXXXXX	GO	Batch Abend	ONION	PTABLER	SOC4	38
PRODPLEX	CW01	H01AC031	FXTDCAS	F039	FM000039	FM000039	AEIM	28

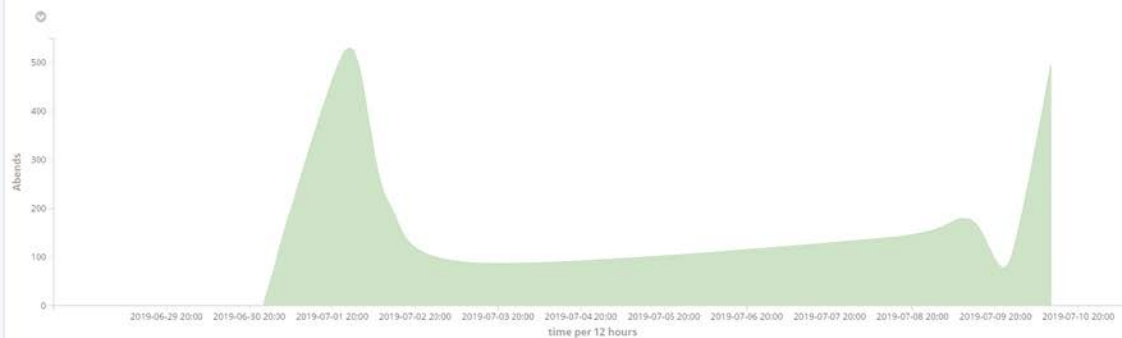
Abend AID Top Users

User	Usage Count
FFHAMJ0	1,741
AA01VS01	438
PFHAMJ0	91
PMJJJ1	88

### Abends by LPAR



### Trend of Abends



### Abends by Type



### Abend Codes



### Viewer Source Support

No results found

### Abends

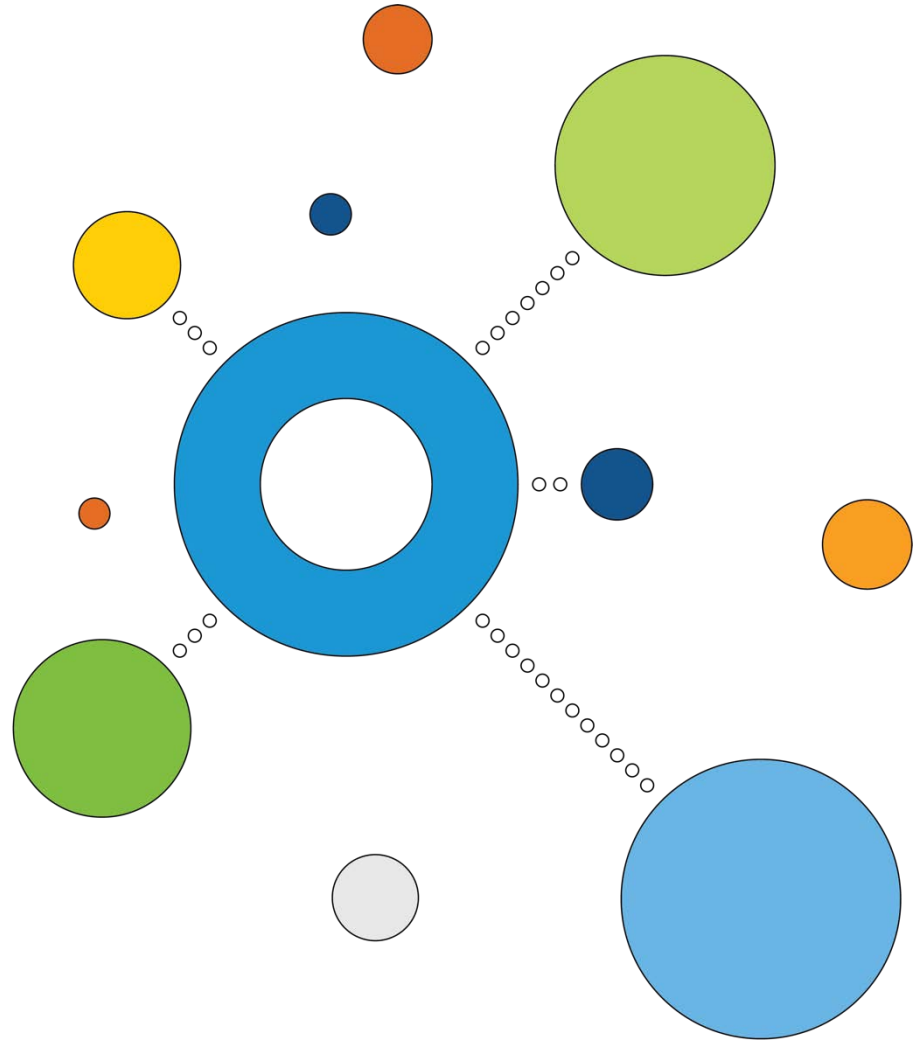
Sysplex	LPAR	Job	Step	CICS Tran	Load Module	CSECT	Abend	Count
PRODPLEX	CW01	H01AC031	FXTDCAS	F039	FM000039	FM000039	AEIM	28

### Abend-AID Top Users

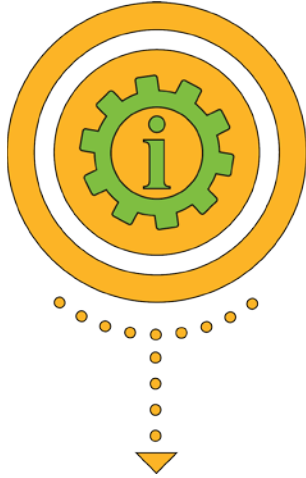
User	Usage Count
FFHJM0	1,737

# Recap

- Root Cause Analysis
- Extended Search
- Perform Flow
- Seamless Integration Between Abend-AID and File-AID
- Using SNAP-AID



# Questions and Next Steps



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