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z/TPF Recoup Enhancements
Proposed Modifications to
Phase 1 Chain Chase Processing

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AIM Enterprise Platform Software

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Introduction

- Proposed changes are in the planning stage
  - This project is limited to Recoup Phase 1
  - Integrate Phase 1 z/TPF and z/TPFDF
    - Consolidate Recoup Scheduling Function
    - Unify Chain Chase Activation
    - Upgrade Status Messages
  - Enhance Control and Tracking
  - Expand Selective Chain Chase Options
  - Other Interesting Changes

Consolidate Recoup Scheduling Function

- Combine Scheduling Control Tables
  - z/TPFDF Schedule Table (SRMP1A) will be removed
  - z/TPF Recoup Schedule Control Table (IRSCT) will be expanded
    - Record ID/Version specific information for each entry in the table
    - Indicator set for CHASE or NOCHASE
    - Update parameters on z/TPFDF DBDEF to bring inline with z/TPF
      - MPPRCD now ANY, PRIME, OTHER, *cpuid*
      - MPNXTD and MPRECD now uses a Record ID/Version combination
  - Modify software used to build and access the IRSCT
    - Remove software related to the SRMP1A
  - Create new commands to display and modify the IRSCT

Consolidate Recoup Scheduling Function

- Advantages
  - Improves flexibility in scheduling
    - Allows better interleaving of data structures
      - z/TPF Descriptors
      - z/TPFCS Data Stores
      - z/TPFDF DBDEF's
  - Permits greater order dependency scheduling
    - Allow cross reference between Descriptors and DBDEF's
      - IDFIRST - MPFSTD
      - IDNEXT - MPNXTD
      - IDCOMP – MPRECD
  - Eliminates duplicate functions and tables
  - Expands options on selective recoup runs

Consolidate Recoup Scheduling Function

- Impact to users
  - Review DBDEF's and Descriptor
    - Take advantage of parameter changes
    - Requires unique instance of Record ID/Version
      - Resolve conflicting versions between z/TPF and z/TPFDF
        - » Recommend changing the z/TPF version number in descriptor
  - IRSCT initialization moved to ZRECP START
    - Built at Start time to permit modification for:
      - ZRECP START TEST1
      - ZRECP START SEL
  - Looking at moving other initialization processes
    - Record ID count tables
    - SONRPE setup

Unify Chain Chase Activation

- z/TPF mainline monitor (BSSC/BSSD)
  - Restructured to handle all record types
    - z/TPF, z/TPFDF, and z/TPFCS
  - Rework to remove excessive DEFRC's
    - Looking a single master ECB
      - Get next record structure to chase
      - Allocates restart areas in keypoint
      - Activates record structure specific monitors via SWISC
      - Monitors end of chase and timeout conditions
      - Use EVNTC count type macros to assist in tracking activity

- z/TPFDF mainline monitor (BRC1/BRCX)
  - Modified to work as a record specific monitor
    - Would work like the BAMx segments in z/TPF

Upgrade Status Messages

- Provide consistent view of Phase 1 progress
  - Reformat the output for ZRECP STATUS
  - Part 1 contains recoup process general information

```
System: RECP0840I 17.20.35 RECOUP STATUS REPORT SSNAME: BSS1
        PHASE I: RESTART REQUIRED  RCP SEQ: 0000204
        START: 06/28 17.05.30  END:
        PRIME PROC: B  ACTIVE PROC: B  ECB: MAX - 200  CUR - 102
        IRSCT ENTRIES: TODO - 0230 COMPLETED - 0105
        TOTAL ERRORS: FIXED 00000000  TIMEOUT 00000000  CHAIN 00000024
     END OF DISPLAY
```

Upgrade Status Messages

– Part 2 contains restart area specific information

```
RECP0841I 17.20.35 RESTART AREA DISPLAY
  RESTART AREA: 0
  TYPE: TPFDF  DBDEF   IR71DF     ID:   ,'B071'  VER: 001 PGM: UF87
  STATUS: TIMEOUT     SSU: HPN1  PROC: B  IS: 1  ELAPSED TIME: 875
  PRIME ECBS:  STARTED 00003200   COMPLETED 00003198  ALLOWED 00000010
  ORD NUMBER:  START   00000000   ENDING    00003199  CURRENT 00003199
  FINDS:       POOL    00012897   DUPE      00000022  RCI     00000000
  ERRORS:      FIXED   00000000   TIMEOUT   00000000  CHAIN   00000015

  RESTART AREA: 1
  TYPE: TPF     GROUP   #QG0JG     ID: JG,'D1C7'  VER: 003 PGM: BKZM
  STATUS: IN PROGRESS  SSU: HPN2  PROC: G  IS: 3  ELAPSED TIME: 020
  PRIME ECBS:  STARTED 00000024   COMPLETED 00000023  ALLOWED 00000002
  ORD NUMBER:  START   00000000   ENDING    00000023  CURRENT 00000023
  FINDS:       POOL    00000098   DUPE      00000049  RCI     00000000
  ERRORS:      FIXED   00000000   TIMEOUT   00000000  CHAIN   00000009

  RESTART AREA: 2
  TYPE: TPFCS  DSNAME  IFSXBSS    ID:            VER:       PGM:
  STATUS: ACTIVE      SSU: HPN1  PROC: B  IS: 1  ELAPSED TIME: 002
  PRIME ECBS:  STARTED 00000006   COMPLETED 00000005  ALLOWED
  ORD NUMBER:  START              ENDING              CURRENT
  FINDS:       POOL    00000034   DUPE      00000000  RCI
  ERRORS:      FIXED   00000000   TIMEOUT   00000000  CHAIN   00000000
END OF DISPLAY
```

Upgrade Status Messages

- ## New general display of IRSCT (During Phase 1)

```
User:    ZRECP SCHED DISPLAY


System: RECP0820I 17.23.43 DISPLAY OF IRSCT ENTRIES
        CREATED:           06/28/2006    17.03.23
        PHASE I START:  06/28/2006    17.05.30
        PHASE I    END:


                  TOTAL          TPF          TPFCS        TPFDF
        REC TO DO:    230          160           30           40
        COMPLETED:      1            1


        CHASE   RECID/DS     VER  TYP  UNQ  PRO  STA  START            END
        YES     AJ,'C1D1'    033  TPF  S--  B    C    06/28 17.05.35   06/28 17:06:13
        YES       ,'B071'    001  DF   ---  B    I    06/28 17.06.00
        YES     JG,'D1C7'    003  TPF  SPI  B    I    06/28 17.20.15
        YES     IFSXBSS           CS   ---  B    I    06/28 17.20.33
        :       :            :    :    :    :    :    :      :         :     :
        YES     SR,'E2D9'    058  TPF  -P-  ANY  T

        END OF DISPLAY
```

Upgrade Status Messages

- Specific display of IRSCT entry

```
User:   ZRECP SCHED DISPLAY JG/003


System: RECP0821I 07.43.43 DISPLAY OF IRSCT ENTRIES
        RECID: JG,'D1C7' VER: 003    RECTP: #QG0JG   UNIQUE: SPI
        PGMNAME: BKZM    TYPE: TPF  PROC: B          RCI: NO
        FCHAS:   YES     NCHAS: JA,'D1C7' VER: 010   PCHAS: AJ,'C1D1' VER: 033
        STATUS:  INPR    START: 06/28 17.20.15       END:
        END OF DISPLAY
```

Enhance Control and Tracking

- Standardized tracking of ECB's
  - z/TPFDF will be modified to use z/TPF controls
    - Restart area in keypoint will reorganized
      - BK0DF will be folded into BK0RP
    - Use IRART (Recoup Active Root Table) for tracking
  - Enhanced centralized Timeout processing
    - Based on the z/TPF timeout model
    - Three stage timeout process
    - Improved displays to assist in timeout processing
    - New profile option to set stage 2 timeout length
    - Ability to extend timeout value by operator command

Expand Selective Chain Chase Options

- New command to display or modify the IRSCT
  - Ability to include or exclude record structures by:
    - Type of record structure
      - z/TPF
      - z/TPFDF
      - z/TPFCS
    - Unique by SSU
    - Record ID/Version (z/TPF and z/TPFDF)
    - z/TPFCS Data Store Name
  - Normal recoup run does not permit modification
    - Only permitted with
      - ZRECP START TEST1
      - ZRECP START SEL

Expand Selective Chain Chase Options

- Example recoup in select mode to chase by SSU

```
ZRECP START SEL
:
ZRECP SCHED ADD SSU-HPN2
RECP0822I IRSCT ENTRY ADDED FOR SSU-HPN2

ZRECP RECALL
```

- Example recoup in test mode to chase all z/TPFDF

```
ZRECP START TEST1
:
ZRECP SCHED REMOVE ALL
RECP0823I IRSCT ENTRY REMOVED FOR ALL

ZRECP SCHED ADD TPFDF
RECP0822I IRSCT ENTRY ADDED FOR TPFDF


ZRECP RECALL
```

Expand Selective Chain Chase Options

- ## Select by File Address RecID/Ver

  - ### Allow multiple concurrent ZRECP SEL operations

    - #### Up to eight chases at a time (number of restart areas)

Other Interesting Changes

- Profile record changes
  - New options
    - DIRMECB – defines the number of simultaneous ECB's to use for pool directory operations (capture, merge, init)
    - STARTLVL – specifies the initial value for the maximum number of recoup ECB's during phase 1
    - TIMEOUT – specifies the time (in seconds) that a chain chase has to complete processing after the initial timeout notification
    - STATUSMSG – specifies the content of status messages during recoup phase 1 (TERSE and VERBOSE)

Other Interesting Changes

- Additional Command

  - ZRECP TIMEOUT

    - Allows display of the current state of restart areas in a timeout condition

    - Permit user to add more time to a restart area in a timeout condition to Analyze and/or complete

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