

# Converting the RACF Name and Range Table to Parmlib

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- ▶ Always test new procedures on a non-production system.
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# Overview

- ▶ In APAR OA52650, RACF Parmlib Support was introduced:  
<ftp://public.dhe.ibm.com/eserver/zseries/zos/racf/pdf/oa52650.pdf>
- ▶ This allows the dataset name table (ICHRDSNT) and range table (ICHRRNG) to be specified in a parmlib member IRRPRMxx
  - ▶ No more assembled modules!!
- ▶ Conversion (REXX) utility on RACF Downloads page (DSNT2PRM):  
<ftp://public.dhe.ibm.com/s390/zos/racf/dsnt2prm/>
  - ▶ **\*EXTREMELY\*** helpful

# Pre-Work

- ▶ Find a system you are willing to test this with - things \*could\* fail - and a friend with UPDATE access to SYS1.PARMLIB for your journey
- ▶ Determine RACF Primary / Backup DB, DATASHARING, ENTRY, and STATISTICS settings.
  - ▶ Find the source code for ICHRDSNT, use DSNT2PRM, or "RVARY LIST" (no STAT):

```
ICH15013I RACF DATABASE STATUS:
ACTIVE USE  NUM VOLUME  DATASET
-----
YES  PRIM    1 DBVOL1   MY.RACFDB.PRIMARY
YES  BACK    1 DBVOL2   MY.RACFDB.BACKUP
MEMBER XXXX      IS SYSPLEX COMMUNICATIONS ENABLED & IN DATA SHARING MODE.
```

- ▶ Determine the current range table offset
  - ▶ Find the source code for ICHRRNG or use DSNT2PRM

# Syntax

## DATABASE\_OPTIONS

SYSPLEX(NOCOMMUNICATIONS | COMMUNICATIONS | DATASHARING)

DATASETNAMETABLE

## ENTRY

PRIMARYDSN(*data-set-name*)

BACKUPDSN(*data-set-name*)

UPDATEBACKUP(ALL | NONE | NOSTATS)

BUFFERS(*value*)

## RANGETABLE

START(*start-value* [CHAR | HEX]) ENTRYNUMBER(*entry-sequence-number*)

# Sample

DATABASE\_OPTIONS

  SYSPLEX(DATASHARING)

  DATASETNAMETABLE

    ENTRY

      PRIMARYDSN('MY.RACFDB.PRIMARY')

      BACKUPDSN('MY.RACFDB.BACKUP')

      UPDATEBACKUP(NOSTATS)

      BUFFERS(255)

  RANGETABLE

    START('00' HEX) ENTRYNUMBER(1)

# DSNT2PRM Sample

```
/* -----  
--  
-- This PARMLIB member was generated on 09/14/18  
-- by the DSNT2PRM utility on system XXXX.  
--  
-- In-Storage version of ICHRDSNT & ICHRRNG were used  
-- to generate this PARMLIB member.  
--  
----- */  
DATABASE_OPTIONS  
DCU004I Generate PARMLIB data based on ICHRDSNT data.  
      # of DS = 1  
/* ----- */  
SYSPLEX(DATASHARING)  
DATASETNAMETABLE  
  ENTRY  
    PRIMARYDSN('MY.RACFDB.PRIMARY')  
    BACKUPDSN('MY.RACFDB.BACKUP')  
    UPDATEBACKUP(NOSTATS)  
    BUFFERS(255)  
DCU005I Generate PARMLIB data based on ICHRRNG data.  
      Ranges = 1  
/* ----- */  
RANGETABLE  
  START('00' HEX)  
  ENTRYNUMBER(1)  
DCU103I INFO:      No OUTPUT data set was specified.  
DCU104W WARNING: Using current in-storage Data Set Name Table  
  values.  These values may NOT match what you IPLed with.  
DCU002W Successful execution of DSNT2PRM, with WARNINGS!  Return code = 4
```

# Staging / Activation Process

- ▶ Create your version of IRRPRMee - check the SYNTAX (multiple IEHIBALLs)
- ▶ Have this copied into SYS1.PARMLIB(IRRPRee)
- ▶ Have RACF=ee statement added to SYS1.PARMLIB(IEASYSee)
  - ▶ Note: PARMLIB values supersede ICHRDSNT / ICHRRNG contents!
- ▶ Create a backout procedure if needed (remove RACF=ee statement, re-IPL to fall back to LINKLIB)
- ▶ Have the system IPL'd (did I mention check the SYNTAX?!)



# Clean-up Process (Post-Conversion)

- ▶ Delete all existing versions of ICHRDSNT in the LINKLIB concatenation
- ▶ Note: You can **\*NOT\*** delete ICHRRNG even though PARMLIB overrides - DOC APAR taken by IBM - RACF will not be found!
- ▶ Have the system IPL'd

# What can go wrong?

- ▶ You do not have OA52650 applied.. Oops!
- ▶ IRRPRMee doesn't exist, has syntax errors, points to invalid RACFDB, incorrect values, RACF=ee not specified in IEASYSee
- ▶ ICHRRNG was deleted from LINKLIB - how dare you (wasn't documented..)
- ▶ ...possibilities are endless?
  - ▶ ICH51003I - NAME NOT FOUND IN RACF DATA SET
  - ▶ [https://www.ibm.com/support/knowledgecenter/en/SSLTBW\\_2.3.0/com.ibm.zos.v2r3.icha600/racfmgrerr.htm](https://www.ibm.com/support/knowledgecenter/en/SSLTBW_2.3.0/com.ibm.zos.v2r3.icha600/racfmgrerr.htm)