RACF® z/OS® V1.13 Update

NY RACF Users Group

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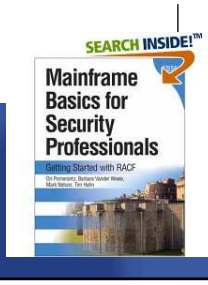
Mark Nelson, CISSP®, CSSLP®
z/OS® Security Server (RACF) Design and Development
IBM Poughkeepsie
markan@us.ibm.com



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RACF Access Control Module for DB2 for z/OS Version 10

DB2 V10: New DB2 System Authorities

- **DB2 for z/OS Version 10 introduces new system authorities that allow for a finer granularity of control:**
  - **SECADM:** Manage all of the security-related objects in DB2 and control access to all DB2 resources in native DB2 security
  - **System DBADM:** Manage most objects in a DB2 subsystem, without having the ability to access data or control access to data
  - **DATAACCESS:** Access data in all user tables, materialized query tables, and views and execute plans, packages functions and procedures in a DB2 subsystem.
  - **ACCESSCNTL:** Grant all authorities and privileges except, DBADM, DATAACCESS, ACCESSCTRL and privileges on security-related objects.
  - **SQLADM:** Monitor and tune DB2 without have any other privilege

DB2 V10: New DB2 System Authorities…

- **If you are using the RACF Access Control Module for DB2 (DSNXRXAC) you can grant these authorities by giving a user READ authority to these resource names in the indicated class:**

DB2 Authority	RACF General Resource Class	Resource Name
ACCESSCTRL	DSNADM	*db2-subsystem*.ACCESCTRL
DATAACCESS	DSNADM	*db2-subsystem*.DATAACCESS
EXPLAIN	DSNADM	*db2-subsystem*.EXPLAIN
SECADM	DSNADM	*db2-subsystem*.SECADM
SQLADM	MDSNSM	*db2-subsystem*.SQLADM
System DBADM	DSNADM	*db2-subsystem*.SYSDBADM

DB2 V10: Other New Security Functions

- **Separation of Duties**
  - You can configure DB2 to prevent users with SYSADM authority from altering authorizations, thus restricting security-related work to SECADM users.
  - This is done by setting the “SEPARATE SECURITY” ZPARM to ‘YES’
  - When SEPARATE_SECURITY is set to ‘YES’, then the SYSADM and SYSCTRL authorities cannot be used to affect the security characteristics of the system. Specifically:
    - The SYSADM authority does not allow the management of security objects, such as roles and trusted contexts.
    - The SYSCTRL authority does not allow the management of roles.
    - The SYSADM and SYSCTRL authorities cannot perform grants and cannot revoke privileges granted by others.
- **Row and Column Access**
  - DB2 allows you to restrict access to the contents of a table by row by and column

z/OS V1.13 Preview Announcement for RACF

z/OS V1.13 Preview Announcment (RACF)

- **RACF Remote Sharing Facility (RRSF)** will be designed to **support the use of TCP/IP connections**, in addition to the current support for SNA Advanced Peer-to-Peer Communications(APPC). When used with TCP/IP, **RRSF will be designed to use Application-Transparent Transport Layer Security (AT-TS) to authenticate peer RRSF nodes and encrypt replication traffic.** AT-TLS provides encryption algorithms **thought to be stronger than those available using APPC**. A sample rule that specifies the strongest available encryption method is planned to be provided. The use of TCP/IP is intended to help improve usability, simplify network configuration, and improve the security of RACF data shared between RACF nodes in the RRSF network.

z/OS V1.13 Preview Announcement (RACF)…

- **What this means is that you can:**
  - Manage your RRSF network using the same skills as the rest of your TCP/IP network
  - Ensure that the same network security policy (IDS, IPS, etc.) is in place for your RRSF network as in place for the rest of your z/OS TCP/IP network
  - Utilize the encryption and peer-node authentication of AT-TLS
  - Keep up with improvements in z/OS Communications Server Security

z/OS V1.13 Preview Announcement (RACF)…

- **RACF is planned to support hardware-generated Elliptic Curve Cryptography (ECC) secure keys**, giving you the ability to issue and use certificates hardware-protected ECC keys**.**

- **RACF support is planned for generating Elliptic Curve Cryptography (ECC) secure keys using the Crypto Express3 Cryptographic Coprocessors (CEX3C) available for zEnterprise servers.** New keywords on the RACDCERT command are designed to allow **you to specify that an ECC key be stored in the ICSF public key data set (PKDS). Corresponding hardware ECC key support is planned for PKI Services.** This new support is intended to allow you to expand your use of certificates with ECC keys protected by hardware.

z/OS V1.13 Preview Announcement (PKI)…

- **For z/OS V1.13, z/OS PKI Services** is planned to **add support for DB2 9 for z/OS or later as its back-end key store**, enabling enterprise-class scale and resilient certificate management.
- **What this means to you:**
  - Leveraging DB2's capabilities for storage and retrieval of large numbers of digital certificates
  - Remove the 32K limit on Certificate Revocation Lists (CRLs)

z/OS V1.13 Statement of Direction (RACF)

- **z/OS V1.13 is planned to be the last release to support BPX.DEFAULT.USER. IBM** recommends that you **either use the BPX.UNIQUE.USER support that was introduced in z/OS V1.11, or assign unique UIDs to users who need them and assign GIDs for their groups.**

z/OS V1.13 Statements of Direction (RACF)…

- **Background: Assigning UID and GIDs**
  - **RACF 2.1 (1994):** Introduced OMVS segments for USERs and GROUPs.
    - Users with an OMVS segment could now use “Open MVS” (now z/OS UNIX System Services)
  - **OS/390 R2.4 (1997**): Introduced BPX.DEFAULT.USER FACILITY class profile
    - Allows assigning UIDs and GIDs to users and groups who do not have OMVS segments; ***One UID and one GID for all default users***

z/OS V1.13 Statements of Direction (RACF)…

- **Background: Assigning UID and GIDs…**
  - **z/OS V1.4 (2002):** Introduced AUTOUID/AUTOGID keyword on ADDUSER, ALTUSER, ADDGROUP, ALTGROUP
    - RACF could now find the next available UID or GID using the BPX.NEXT.USER profile in the FACILITY class
    - Required enabling RACF Alternate Index Mapping (“AIM”) to stage 2
      - Limitation of 129 eight-character users sharing one UID
      - Required running migration utility (“IRRIRA00”)
  - **z/OS V1.11 (2009):** Automatic generation of OMVS segment for USERs and groups
    - Built upon AUTOUID/AUTOGID
    - Requires AIM stage 3
    - Uses the BPX.UNIQUE.PROFILE in the FACILITY class

z/OS V1.13 Statements of Direction (RACF)…

- **What this means to you:**
  1. If you are using BPX.UNIQUE.USER then:
     - You are not using BPX.DEFAULT.USER (even if it is defined)
     - This SoD has no impact to you.
  2. If you are already assigning UIDs and GIDs to all users using z/OS UNIX System Services by assigning OMVS segments to all necessary users and groups, then:
     - You must continue to assign all new users and groups OMVS segments
  3. If you are already assigning UIDs and GIDS to all users user z/OS UNIX Sstem Services by defining OMVS segments using AUTOUID/AUTOGID (which uses BPX.NEXT.USER) then:
     - You are already using AIM at a minimum of stage 2
     - You must continue to assign all new users and groups OMVS segments
  4. If you are using only BPX.DEFAULT.USER
     - You must either move to the automatic generation of OMVS user and group segments or assign OMVS user and group segments to all necessary users and groups