

Avoiding DFSMShsm Recalls with ARCCATGP

Performing catalog operations on datasets migrated by DFSMShsm (Hierarchical Storage Manager) causes them to be automatically recalled. You can save storage administrators time by enabling them to perform UNCATALOG, RECATALOG, and DELETE/NOSCRATCH operations without invoking the recall. This is especially helpful when they are performing bulk administrative tasks against many datasets.

To accomplish this, define the group ARCCATGP to RACF and connect the USERIDs of your storage administration staff to this group. When these users are logged on with ARCCATGP as their current connect group, DFSMShsm will bypass the recall process. Note that they must log on with this group to take advantage of this capability. Assuming ARCCATGP is not their default group, they will need to do the following. In TSO, they must enter ARCCATGP on the TSO/E Logon panel in the field labeled **Group Ident**. In batch, they would code **GROUP=ARCCATGP** on the JOB card. For more details, see IBM's z/OS DFSMShsm Implementation and Customization Guide.

Performance: Increase your Enqueue Residency - ERV

If you execute large sets of RACF commands in TSO or batch jobs, you run the risk of tying up RACF and preventing other users from completing RACF-related tasks. This can cause a significant operational problem if you hold up users trying to log onto CICS during the morning logon tidal wave. CONNECT and REMOVE commands can be especially troublesome because they usually must update both a user and a group profile.

When you execute a RACF command, your address space acquires an exclusive enqueue

on the Global Resource Serialization (GRS) resource SYSZRACF. No other address space can use RACF until your command completes execution and releases the enqueue.

In most z/OS installations, TSO users and batch jobs have low priorities. This greatly increases the likelihood they will be temporarily swapped out to allow other tasks to perform work. If they are swapped out in the midst of executing a RACF command, they will continue to hold the enqueue. No further RACF work is performed until they are finally swapped back in and the command completes execution.

The solution to this problem is to grant more CPU Service Units to any address space enqueued on a system resource to enable it to complete work before being swapped out. The goal is to ensure each RACF command is completed and the enqueue is released before the next task takes over.

Granting more service units is accomplished by increasing the value associated with the ERV parameter in PARMLIB member IEAOPTxx. The default is 500. IBM recommends you increase this value to somewhere in the range of 40,000 to 50,000. This change will benefit all tasks holding enqueues on any system resource, not just RACF. For details, see IBM's z/OS MVS Initialization and Tuning Reference.

To learn more about how to further improve RACF performance:

- Visit the **RACF Center** on our website for a copy of our presentation [RACF Performance Tuning](#).
- Attend the presentation [Achieving Peak RACF Performance](#) by our colleague Bob Hansel at the Vanguard Expo in June 2007.
- Read our magazine article titled [10 Ways to Improve RACF Performance in the Oct/Nov 2006 issue of zJournal](#).

Enable Logging of Access to CA's ENDEVOR Resources

By default, ENDEVOR's External Security Interface (ESI) does not log any RACF violations or access to the system log or SMF. However, it can be customized to do so. You have options as to what types of events it logs and how.

Logging is governed by the LOG= parameter in the NAMEQU format statements in Endeavor's BC1TNEQU table. This parameter affects the LOG= setting ENDEVOR uses in RACROUTE calls. The default is NONE, which suppresses all logging. Here are the LOG= parameter settings we suggest for the various NAMEQU formats:

ENVIRONMENT_ACCESS	LOG=NOFAIL
PRIMARY_OPTIONS	LOG=NOFAIL
BACKGROUND_OPTIONS	LOG=NOFAIL
ACTION_INITIATION	LOG=ASIS
PACKAGE_OPTIONS	LOG=ASIS

The first three are associated with menu-building actions. ENDEVOR determines what items to display on the user's ISPF panel by testing the user's authority to each possible menu item. If RACF reports a "violation" for a menu item, ENDEVOR simply does not display it. This is not a user initiated or controllable action, and therefore, it is not a "violation" as in a willfully attempted infringement of policy. There is no value in recording or displaying these violations. However, it may be useful for diagnostics or monitoring to see what menu items a user is able to access. LOG=NOFAIL skips violations but enables logging of authorized access.

The last two NAMEQU formats are related to user actions such as attempts to display or update software items. For these, you do want to have the ability to log violations as well as authorized access. LOG=ASIS gives RACF complete control over logging using profile AUDIT options, the user UAUDIT attribute, and SETROPTS LOGOPTIONS settings.

To learn more about guarding ENDEVOR with RACF:

- Visit the **RACF Center** on our website for a copy of our presentation on RACF and ENDEVOR (soon to be updated).
- Attend the presentation *Steadfast Software Security - Endeavor & RACF Unite* by our colleague Rose Sakach at the Vanguard Expo in June 2007.

Auditors: Review SURROGAT Batch Submit Authority

Profiles of the form *userid.SUBMIT* in the SURROGAT class allow a user to submit a batch job with the identity and authority of another user simply by coding `USER=userid` on the JOB card. Be especially mindful of who can submit jobs with USERIDs that have RACF SPECIAL, OPERATIONS, or AUDITOR authority.

To see who is authorized to submit jobs with a high-power USERID, simply execute the following RACF command:

```
RLIST SURROGAT userid.SUBMIT ALL
```

If a profile exists allowing use of this USERID, it will be displayed along with the access list of users and groups authorized to submit it.

RSH News

Welcome to the inaugural issue of **RSH RACF Tips**. To be added to the mailing list for future editions, send your business postal and email address to info@rshconsulting.com. (Email addresses will not be used for bulk solicitations.)

Going to Vanguard Expo 2007? Visit our booth and attend our presentations. Bob Hansel, Rose Sakach, and Bob Whittle will be speaking on a variety of RACF topics.

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