z/OS 3.2 IBM Education Assistant

Solution Name: ENQ Protection for JES System Datasets

Solution Element(s): JES2

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Agenda

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Trademarks

- See url http://www.ibm.com/legal/copytrade.shtml for a list of trademarks.
- Additional Trademarks:
  - None

Objectives

- In this presentation, we will describe a feature new to 3.2, ENQ protection for JES2 System Datasets.

Overview

- Who (Audience)
  - z/OS system administrators
- What (Solution)
  - Provide protection to prevent accidental deletion and modification of JES2 system data sets
- Wow (Benefit / Value, Need Addressed)
  - Improve the reliability and stability of JES2 by preserving highly important resources
  - Reduce the need for urgent service calls

Usage & Invocation

- This feature is active by default. No intervention is required once JES2 3.2 is started.
- JES2 establishes exclusive SYSDSN ENQs on SPOOL and Checkpoint data sets.
- Most z/OS applications will not modify or delete data sets that have an exclusive SYSDSN ENQ on them.
- This protection can be toggled off temporarily using the command

  `$T MASDEF,SYSDSENQ=NO`, and turned back on with **`$T MASDEF,SYSDSENQ=YES`**
- When SPOOL and Checkpoint data sets are lost, JES2 can lose data for good, and require a cold start. This feature significantly reduces this risk.

Interactions & Dependencies

- Software Dependencies
  - None
- Hardware Dependencies
  - None
- Exploiters
  - Any JES2 installation

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No
- SYSDSN ENQs are honored system-wide, and by down-level members. Down-level members will not create these ENQs on JES2 system data sets.
  - Therefore, when the last 3.2 JES2 member goes away in a system, the system data sets will no longer be protected.
  - If there is at least one MAS with a 3.2 member, the SPOOL and checkpoint data sets for that MAS will be protected for every member on the system.

Upgrade & Coexistence Considerations (2)

- This feature blocks the allocation of SPOOL data sets via batch jobs
  - To replace jobs that allocate SPOOL data sets, you can use a **$S SPOOL** command instead, such as **$S SPOOL(SPOOL2),SPACE=MAX**. Note that the SPACE parameter is required to actually allocate a data set with this command.
- Functions such as DYNALLOC, IEHPROGM, TSO commands (alloc, delete, etc.), and JCL DD statements with the DSNAME parameter are impacted by SYSDSN ENQs.
  - ICKDSF, IDCAMS, IEBCOPY, IEBDG can bypass SYSDSN ENQ protection
- SYSDSN ENQs operate based on data set name, and nothing else.
  - If, for example, an installation has a SPOOL data set called SPOOL1 on volume VOL1, this function will block the creation of a data set called SPOOL1 on volume VOL2.

Installation & Configuration

- This function takes effect immediately when JES2 3.2 is installed.
- Protection only applies to data sets on DASD, not those on Coupling Facilities.

Summary

- In this presentation we described the new ENQ Protection feature for JES2 System Datasets.

Appendix

- Publications
  - z/OS 3.2 JES2 Commands
  - z/OS 3.2 JES2 Initialization and Tuning Guide
  - z/OS 3.2 JES2 Initialization and Tuning Reference
  - z/OS 3.2 JES2 Messages
  - z/OS 3.2 DSFSMSdfp Advanced Services