

IBM Education Assistance for z/OS V2R2

Item: Data Set Integrity

Element/Component: JES3



Agenda

- Trademarks
- Presentation Objectives
- Overview
- Usage & Invocation
- Migration & Coexistence Considerations
- Presentation Summary
- Appendix



Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.



Presentation Objectives

- Review the capability customers will have with z/OS JES3 V2R2 to enable Data Set Integrity (DSI) for the JES3 data sets.
 - Not to be confused with the JES3 DSI facility = Dynamic System Interchange



Overview

- Problem Statement / Need Addressed
 - JES3 does nothing to protect its data sets while they are in use by JES3. This includes SPOOL, JCT, and CKPT data sets. SAF-authorized users on the system can inadvertently scratch these data sets. Worse yet, they can reallocate and write over the space while JES3 is executing. This exposure is a data integrity and availability issue.
 - RFE 57123 / FITS MR1020084625 / SHARE SOJES393353
- Solution
 - Use Program Properties Table (PPT) in a SCHEDxx member to specify Data Set Integrity (DSI) for JES3 programs.
- Benefit / Value
 - ENQs for the JES3 batch and dynamic allocations will be used to limit access to the JES3 data set.



Usage & Invocation

- **Actions you need to take:**

- Specify DSI for JES3 programs in a SCHEDxx member:

```
PPT PGMNAME(IATINTK) NOCANCEL NOSWAP SYST  
    DSI KEY(1) NOHONORIEFUSIREGION
```

```
PPT PGMNAME(IATINTKF) NOSWAP SYST DSI KEY(1)
```

- Review the JES3 cataloged start procedure to make sure all data sets allocated using DD statements specify **DISP=SHR**.
 - If DD allocations are used in the JES3 start procedure (not recommended), DISP=OLD should not be specified. Otherwise the first JES3 started will lock out other JES3 address spaces in the same Sysplex.
- Check your JES3 start procedure and your DSN specification on the DYNALLOC statement in your inish deck for duplicate data set names.
 - Since an ENQ is held on the data set names, it is recommended that you use unique spool data set names to allow for offline allocation, unallocation and formatting.



Usage & Invocation

- **To activate DSI:**
- IPL with the updated SCHEDxx member in use and start JES3.
 - OR –
- Use the SET SCH command with the updated SCHEDxx member to change the settings. Restart JES3 to pick up the changes.
 - Any JES3 restart will pick up the changes. No IPL required.
 - Can be used to return to NODSI without an IPL.



Usage & Invocation

- **What occurs:**

- Setting DSI in the PPT affects the batch allocation of JES3 data sets identified in the JCL of the JES3 start procedure.
 - Shared ENQ for batch allocations where the JES3 start procedure DD statement specifies DISP=SHR.
 - Exclusive ENQ for batch allocations where the JES3 start procedure DD statement specifies DISP=OLD (not recommended).
- JES3 code is updated to set DSI for ALL dynamic allocations if DSI is set in the PPT.
 - Shared ENQ for data sets identified in the initialization deck and dynamically allocated by JES3 (always allocated as DISP=SHR).



Usage & Invocation

- **New JES3 health check:**
- Check (IBMJES3,JES3_DATASET_INTEGRITY) determines if DSI or NODSI has been specified on the JES3 entries in the Program Properties Table (PPT). The check generates an exception message when the current DSI setting does not match the specified setting.
- Default keywords for the check which you can override on either a POLICY statement in the HZSPRMxx parmlib member or on a MODIFY command:

```
UPDATE,  
CHECK(IBMJES3,JES3_DATASET_INTEGRITY),  
SEVERITY(LOW),  
INTERVAL(ONETIME),  
PARM('DSI(YES)')  
DATE('date_of_the_change'),  
REASON('your update reason')
```



Migration & Coexistence Considerations

- Complete JES3 Data Set Integrity is available only with JES3 V2R2.
 - Specifying DSI in the PPT for previous levels affects only the allocation of JES3 data sets identified in the JCL of the JES3 start procedure.
- JES3 release toleration APAR OA43563 is required for systems in the JESplex which are at JES3 V2R1 or V1R13.
 - Required due to other support added for JES3 V2R2.



Presentation Summary

- Use PPT in a SCHEDxx member to specify DSI for the JES3 programs.
- Review the JES3 cataloged start procedure to make sure any data sets are allocated with DISP=SHR.
- ENQs for the JES3 batch and dynamic allocations will then be used prevent inadvertent access to the JES3 data sets.
- New JES3 health check to verify the DSI setting.



Appendix

- JES3 documents updated:
 - *z/OS V2R2 JES3 Initialization and Tuning Guide* (SA32-1003-01)
 - *z/OS V2R2 JES3 Messages* (SA32-1007-01)
 - New JES3 health check messages
- MVS documents updated:
 - *IBM Health Checker for z/OS V2R2 User's Guide* (SC23-6843-03)
 - New section for “JES3 Checks (IBMJES3)”

