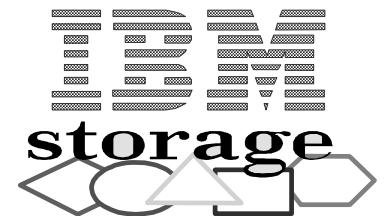


You don't need no stinkin' OPERATIONS



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Storage Responsibilities



- Storage Administrators often ask for OPERATIONS authority to manage:
 - Overall SMS configuration, constructs, routines
 - Storage devices, DASD subsystems and Tape Libraries
 - Basic Catalog Structure, along with VVDS and VTOC inventories
 - Movement of data between devices, systems, sites
 - Backup/Migration inventory
 - Tape Cartridge inventory

The Storage Dilemma

- DFSMS/MVS provides utilities to move and manipulate storage containing data
 - DFSMSdfp Data Facility Product
 - DFSMSdss Data Set Services
 - DFSMSHsm Hierarchical Storage Manager
 - DFSMSrmm Removable Media Manager
- Load Modules shared between multiple functions
 - Difficult to use RACF program control
- Backup/Recovery needs read/write authority
 - Administrators need to treat data like CARGO, and do not need access to information inside

Overview of OPERATIONS

- With system OPERATIONS authority
 - Create, Copy or Delete data sets
 - Process Tape Volumes
- DFSMS/MVS provides alternatives to perform storage administrator functions without OPERATIONS authority

Using Facility Classes

- Commands for Facility Classes
 - SETROPTS RACLIST(FACILITY)
 - RDEFINE FACILITY STGADMIN.x.y.z
UACC(NONE)
 - PERMIT STGADMIN.x.y.z CLASS(FACILITY)
USER(userid) ACCESS(read)
 - RALTER FACILITY STGADMIN.x.y.z
GLOBALAUDIT(SUCCESS)
- In most cases, generic profiles can be used ".*"
- ISV security packages need to be "functionally equivalent" to RACF to provide support

DFSMSdfp Facility Classes

- Facility Classes for 3990 DASD controllers:
 - STGADMIN.IDC.BINDDATA
 - STGADMIN.IDC.LISTDATA
 - STGADMIN.IDC.LISTDATA.ACCESSCODE
 - STGADMIN.IDC.SETCACHE
 - STGADMIN.IDC.SETCACHE.DISCARDPINNED
 - STGADMIN.IDC.SETCACHE.PENDINGOFF
 - STGADMIN.IDC.SETCACHE.REINITIALIZE
 - STGADMIN.IDC.SETCACHE.SUBSYSTEM

DFSMSdfp Facility Classes

- Facility Classes for the SMS Configuration:
 - STGADMIN.IGD.ACTIVATE.CONFIGURATION
 - STGADMIN.IGG.ALTER.SMS
 - STGADMIN.IGG.LIBRARY
 - STGADMIN.IGWSHCDS.REPAIR
 - STGADMIN.IGG.ALTER.UNCONVRT
 - STGADMIN.IDC.DCOLLECT

DFSMSdfp Facility Classes

- Facility Classes for ICF Catalog maintenance:
 - STGADMIN.IDC.DIAGNOSE.CATALOG
 - STGADMIN.IGG.DIRCAT
 - STGADMIN.IGG.ALTBCS
 - STGADMIN.IGG.DELETE.NOSCRATCH
 - STGADMIN.IGG.DELGDG.FORCE
 - STGADMIN.IGG.DEFDEL.UALIAS
 - STGADMIN.IGG.DEFNVSAM.NONVR

DFSMSdfp Facility Classes

- Facility Classes for VVDS maintenance:
 - STGADMIN.IDC.DIAGNOSE.VVDS
 - STGADMIN.IGG.DEFNVSAM.NOBCS
 - STGADMIN.IGG.DELNVR.NOBCSCHK
 - STGADMIN.IGG.DLVVRNVR.NOCAT

DFSMSdss for Administrators

- DFSMSdss allows for Storage Administrators to manipulate data without RACF checking
 - RACF Facility Class must be active
 - Facility Class Profiles must be defined
 - ▶ STGADMIN.ADR.STGADMIN.command
 - User must have READ access to profile
 - User must specify ADMIN keyword on batch job

```
COPY DATASET ( INCLUDE ( MYDATSET ) ) -  
  LOGINDDNAME ( DASD1 ) OUTDDNAME ( DASD2 )  
  DELETE CATALOG ADMIN
```

DFSMSdss for Administrators

- Facility Classes for ADMIN keyword
 - STGADMIN.ADR.STGADMIN.COMPRESS
 - STGADMIN.ADR.STGADMIN.COPY
 - STGADMIN.ADR.STGADMIN.COPY.DELETE
 - STGADMIN.ADR.STGADMIN.COPY.RENAME
 - STGADMIN.ADR.STGADMIN.DEFRAG
 - STGADMIN.ADR.STGADMIN.DUMP
 - STGADMIN.ADR.STGADMIN.DUMP.DELETE
 - STGADMIN.ADR.STGADMIN.RELEASE
 - STGADMIN.ADR.STGADMIN.RESTORE
 - STGADMIN.ADR.STGADMIN.RESTORE.RENAME

DFSMSdss for End Users

- Facility Classes for DUMP/RESTORE
 - STGADMIN.ADR.DUMP.CNCURRNT
 - STGADMIN.ADR.DUMP.INCAT
 - STGADMIN.ADR.DUMP.PROCESS.SYS
 - STGADMIN.ADR.DUMP.TOLERATE.ENQF
 - STGADMIN.ADR.RESTORE.BYPASSACS
 - STGADMIN.ADR.RESTORE.DELCATE
 - STGADMIN.ADR.RESTORE.IMPORT
 - STGADMIN.ADR.RESTORE.TOLERATE.ENQF

DFSMSdss for End Users

- Facility Classes for COPY and other functions
 - STGADMIN.ADR.COPY.BYPASSACS
 - STGADMIN.ADR.COPY.CNCURRNT
 - STGADMIN.ADR.COPY.INCAT
 - STGADMIN.ADR.COPY.PROCESS.SYS
 - STGADMIN.ADR.COPY.TOLERATE.ENQF
 - STGADMIN.ADR.CONVERTV
 - STGADMIN.ADR.DEFRAG
 - STGADMIN.ADR.RELEASE.PROCESS.SYS
 - STGADMIN.ADR.RELEASE.INCAT

DFSMSHsm Authorization

- HSM provides component-level authority
- Specified in ARCCMDxx parmlib member
 - AUTH user1 DBA(CONTROL)
 - AUTH user2 DBA(USER)
- CONTROL allows user to authorize other users
- RACF Facility Classes available for specific HSM functions:
 - ABACKUP - Aggregate Backup
 - ARECOVER - Aggregate Recovery

DFSMShsm Facility Classes

- Facility Classes for ABACKUP / ARECOVER
 - STGADMIN.ARC.ABACKUP
 - STGADMIN.ARC.ABACKUP.agg
 - STGADMIN.ARC.ARECOVER
 - STGADMIN.ARC.ARECOVER.agg
 - STGADMIN.ARC.ARECOVER.agg.REPLACE
 - STGADMIN.ARC.ARECOVER.agg.RENTGT
- Special userid OPER applies to commands issued from operator console

DFSMSHsm Facility Classes

- Statement of Direction: DFSMSHsm will provide Facility Class support for all HSM-authorized command functions
 - APAR OW29564 under field test
 - Requires RACROUTE=EXTRACT,TYPE=EXTRACT
- Controls HSM-authorized users access to data:
 - STGADMIN.ARC.ENDUSER
- Provides alternative to HSM authorization
 - STGADMIN.ARC.SAFCONTROL
 - STGADMIN.ARC.command

DFSMSrmm Facility Classes



- Facility Class for RMM activities
 - STGADMIN.EDG.HOUSEKEEP
 - STGADMIN.EDG.LISTCONTROL
 - STGADMIN.EDG.MASTER
 - STGADMIN.EDG.OPERATOR
 - STGADMIN.EDG.OWNER.userid
 - STGADMIN.EDG.RELEASE
 - STGADMIN.EDG.RESET.SSI
 - STGADMIN.EDG.INERS.WRONGLABEL
 - STGADMIN.EDG.VRS
 - STGADMIN.EDG.FORCE

DFSMSrmm Facility Classes

- Facility Class for RMM volumes
 - STGADMIN.EDG.IGNORE.TAPE.volser
 - STGADMIN.EDG.LABEL.volser
 - STGADMIN.EDG.NOLABEL.volser
 - ▶ Access READ, UPDATE or ALTER may be needed depending on the input/output requirement, and the scratch status of the tape volume involved

Reference Information



- Product Documentation Manuals:
 - RACF Security Administrator's Guide
 - DFSMSdfp Storage Administration Guide
 - DFSMSdss Storage Administration Guide
 - DFSMShsm Storage Administration Guide
 - DFSMSrmm Implementing and Customization Guide
- Web Site
 - www.storage.ibm.com/software/sms/smshome.htm

Summary

- Storage Administrators are a critical part of the I/T team
- Managing storage often entails manipulating data, including sensitive data
- DFSMS/MVS allows Security Administrators to maintain control, while allowing Storage Administrators the ability to get their jobs done