



BMC Mainframe: HSM Implementation & Customisation

COURSE ABSTRACT

COURSE CODE

» MGRS-HSIC-2021

APPLICABLE VERSIONS

» Not Applicable

DELIVERY METHOD

» Instructor-led Training (ILT)

COURSE DURATION

» 2 Days

PREREQUISITES

» z/OS at a conceptual level and familiarity with using JCL and the utility programs

RECOMMENDED TRAININGS

» NA

Course Overview

The course is developed and delivered by © RSM Technology.

This two-day course is designed, written, and presented by the UK's foremost mainframe storage management specialists. The course describes and explains how best to implement, customise, and utilize HSM. Start-up commands and options are examined in detail, giving practical guidance on performance and availability issues. Customization of the environment is also covered in detail.

Effective management and monitoring of HSM are important if you are to provide a good service to end- users, and techniques to do this are comprehensively covered, as is the important and often neglected subject of disaster backup using HSM. There are a number of challenging practical exercises throughout the course.

Target Audience

Anyone with responsibility for mainframe data storage, space management or back-up and recovery procedures.

Learner Objectives

- » Implement migration and recall
- » Implement backup/recovery
- » Describe HSM performance issues and tune HSM
- » Issue (and understand) HSM commands
- » Utilize FIXCDS and PATCH commands



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COURSE ACTIVITIES

- » Classroom Presentations
- » Demonstration


BMC MAINFRAME INFRASTRUCTURE AND PLATFORMS LEARNING PATH

- » <https://www.bmc.com/education/courses/find-courses.html#filter/%7B%22type%22%3A%22edu-specific-types-159150236%22%7D>

CERTIFICATION PATHS

- » This course is not part of a BMC Certification Path

DISCOUNT OPTIONS

- » Have multiple students? Contact us to discuss hosting a private class for your organization
- » [Contact us for additional information](#) 

Course Modules

The HSM Strategy

- » DFSMS/MVS manuals
- » HSM functional overview
- » HSM as part of SMS
- » Management Class
- » Management Class attributes
- » Storage Group attributes

Migration/Recall

- » Key commands
- » Migration types
- » Defining migration
- » Defining Primary volumes
- » Defining ML1 volumes
- » Small dataset packing
- » Defining ML2 volumes
- » Controlling daily migration
- » Secondary migration - cleanup of ML1 & MCDS
- » Migration from MLO
- » Interval migration
- » Command migration
- » Command migration - SMS
- » Freevol command
- » Recalling data sets

- » Recall process
- » Common Recall Queue (CRQ)
- » Enabling CRQ
- » Activating CRQ - SETSYS COMMONQUEUE
- » Controlling Recall non- SMS
- » Delete by Age - an alternative to migration for non-SMS
- » Delete if Backed Up - an alternative to migration for non-SMS
- » Supported data sets
- » Migration/Recall performance summary
- » SDSP performance summary

Backup and Recovery

- » Backup flow
- » Backup events
- » Backup volume definitions
- » Backup control
- » CDS backup
- » CDS recovery utility
- » Backup dataset naming
- » Backup to DASD
- » Command backup - volume
- » BACKVOL examples
- » Backup command

- » Controlling command backup - SETSYS DSBACKUP
- » Controlling command backup - ML1 overflow
- » Command bac-up - dataset
- » Bac-up support
- » Inline backup
- » Dataset recovery
- » Backup performance summary
- » Deleting unwanted backups
- » EXPIREBV DISPLAY

HSM Miscellaneous Functions

- » DSS cross memory mode
- » Sharing Parmlib - ONLYIF
- » Multi-host considerations
- » Serialization logic overview
- » CDS serialization
- » User serialization
- » Multiple HSMplexes
- » Secondary host promotion (failover) for DFSMSHsm
- » HSM's five activity logs
- » Logging
- » Log contents

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- » ARCPRLOG output
- » ARCPEDIT output
- » Controlling tape mounts
- » Tape selection/selection options
- » Controlling tape usage
- » Recycling tapes
- » Command authorization
- » RACF Facility class - HSM command security
- » Problem Determination Aid Facility (PDA)

HSM Commands

- » How HSM commands are used
- » Operator commands
- » Query command
- » QUERY ACTIVE
- » QUERY for available tapes and space
- » QUERY AUTOPROGRESS
- » Storage administration commands
- » Original AUDIT command
- » Enhanced AUDIT command
- » Enhanced versus original AUDIT
- » List command
- » List backup volumes
- » List dataset information from MCDS
- » List dataset Information from BCDS
- » List dataset information from both MCDS and BCDS
- » List migration or primary volume information
- » LIST ML2 (tape) MCDS
- » LIST PRIMARYVOLUME(volser) BCDS
- » HOST (hostid) LIST TTOC SELECT()
- » LIST TTOC (volser) DATASETINFORMATION

- » LIST spanning excessive volumes
- » LIST FAILEDRECYCLE and FAILEDCREATE
- » LIST user; REPORT command
- » REPORT daily statistics
- » REPORT volume statistics
- » System Programmer commands
- » Commands for end-users

Availability Management

- » Fast Replication (FRBACKUP)
- » Define Copy Pool
- » Invoking Fast Replication
- » FR options
- » Volume & Disaster Back-up/Recovery features
- » Autodump
- » Autodump controlling commands
- » Recovery from dump data
- » Recovery commands
- » LIST PRIMARYVOLUME(volser) ALLDUMPS BCDS
- » LIST PVOL() BACKUPCONTENTS BCDS
- » LIST DUMPCLASS(class)
- » LIST DUMPVOLUME
- » LIST DUMPVOLUME(volser) BCDS DUMPCONTENTS
- » Volume dump performance summary
- » Aggregate back-up and recovery (ABARS)
- » Copying tapes
- » TAPEREPL in Disaster Recovery
- » Duplex tape
- » Duplex tape flow
- » Duplex tape support
- » Disaster back-up overview

- » Disaster Recovery process
- » Recovering ML1 or ML2
- » Recovering lost back-ups on ML1
- » Damaged CDS, Journal Full
- » Damaged Journal, undamaged CDS
- » Overwritten migration tape

Startup & Monitoring

- » HSM start-up procedure
- » HSM start-up options
- » Defining Control Data Sets
- » Multi-cluster Control Data Sets
- » VSAM Record Level Sharing (RLS)
- » Requirements for CDS RLS serialization
- » Implementing RLS mode
- » Control Data Set performance summary
- » General HSM performance summary
- » Monitoring HSM
- » Controlling HSM

HSM Structure & Flow

- » HSM input
- » MWE queuing flow
- » Data Area Control Blocks
- » Management Work Element
- » DISPLAY command
- » PATCH command
- » Control Data Set Records
- » MCDS record types
- » BCDS record types
- » BCDS record types
- » Useful patches