



BMC Mainframe: Storage Management Administration & Exploitation

COURSE ABSTRACT

COURSE CODE

» MGRS-SMAE-2021

APPLICABLE VERSIONS

» Not Applicable

DELIVERY METHOD

» Instructor-led Training (ILT)

COURSE DURATION

» 4 Days

PREREQUISITES

» A general knowledge of z/OS concepts, the ability to use TSO and familiarity with JCL and Utility programs

RECOMMENDED TRAININGS

» NA

Course Overview

The course is developed and delivered by © RSM Technology.

This popular four-day course describes and explains how to implement and exploit the features provided by the z/OS storage environment and covers SMS in particular. It examines both hardware and software features and explains how to exploit them to the full. In addition, the course will give attendees a detailed knowledge of how best to design and test the SMS Constructs and ACS routines.

The course also provides a basis for evaluating standards and for establishing an optimized System Managed Storage (SMS) environment. Key components such as catalogs, VTOCs and I/O definitions are all fully explained.

There are a number of challenging online practical sessions during the course which, among other things, teach how to write optimized ACS routines

Target Audience

This course is ideal for all those responsible for the z/OS Data Storage environment. It is primarily designed for Storage Administrators but is also beneficial for technical support and senior operations personnel.

Learner Objectives

- » Explain IBM's storage management concept as implemented through SMS
- » Exploit the hardware features utilized by SMS
- » Define I/O devices and get them recognized by z/OS
- » Define VTOCs and VTOCIXs
- » Administer ICF Catalogs
- » Define and maintain data classes, storage classes, management classes and storage groups
- » Write and maintain optimized ACS routines
- » Audit and optimize the SMS environment
- » Describe the functions of HSM



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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

Storage Management Overview

- » What is storage management?
- » Space management roles
- » DFSMS products
- » DFSMS Optimizer
- » NaviQuest feature
- » Advantages of an SMS environment
- » Availability management
- » Performance management

Data Storage Hardware

- » Direct Access Storage Devices
- » I/O operations on disks
- » DASD performance reporting
- » caching concepts
- » Read Hit
- » Write commands
- » Write Hit
- » Read Miss
- » Write Miss
- » cache modes
- » Record Level caching
- » Peer to Peer Remote Copy (PPRC)
- » Extended Remote Copy (XRC)
- » Concurrent Copy

- » Extended Format Data Sets
- » Sequential Data Striping support
- » RAID technology
- » Flashcopy
- » Extended Address Volumes-
- » Virtual Tape Servers
- » Virtual Tape configurations

Introduction to HCD

- » I/O configuration principles
- » I/O configuration practicalities
- » I/O configuration addressing
- » HCD definition process
- » Objects managed by HCD
- » Load member
- » IODF processing at IPL
- » HCD Primary Option menu
- » Creating a new work IODF
- » Sizing the work IODF
- » Defining the new configuration menu
- » Pull-down menu action bar
- » Goto pull down menu
- » Filter pull down menu
- » Backup pull down menu
- » Query pull down menu

- » Help pull down menu
- » Context menus
- » PF keys
- » Keyboard navigation

Catalogs & VTOCs

- » Catalog overview
- » Catalog search order
- » Catalog environment
- » Multi- level aliases
- » Catalog address space
- » VTOC and IXVTOC
- » Initializing DASD volumes
- » VTOC & VTOCIX sizing
- » Extending VTOC & VTOCIX

Auditing SMS

- » Working with users
- » identify general requirements
- » how to gather user data
- » Negotiate service levels with users
- » Space requirements
- » Meeting space requirements
- » Other space issues
- » Availability issues
- » Recovery

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- » Backup/Recovery
- » Other service level issues
- » Monitor service levels
- » DCOLLECT
- » Running DCOLLECT
- » DCOLLECT output records
- » Managing data sets
- » PDSE processing
- » PDSE load libraries
- » Access Methods enhancements
- » VSAM Record Level Sharing
- » VSAM greater than 4 GB
- » What is Pooling?
- » Why pooling?
- » How many pools?
- » Positioning for SMS - review questions

Writing ACS Routines

- » ACS routines - what are they?
- » Automatic Class Selection - how many?
- » an ACS example
- » ACS routine rules
- » ACS mask rules
- » ACS Read/Write variables
- » ACS Read-only variables
- » ACS special purpose variables
- » Other ACS variables
- » OAM & tape ACS variables
- » ACS operations
- » ACS statements (PROC, END, SET, FILTLIST)

- » ACS statements (SELECT, END)
- » Coding ACS routines
- » ACS application selection
- » ACS translation panel
- » ACS validation panel
- » Testing ACS routines
- » Defining test cases
- » ACS coding tips
- » ACS exit routines
- » ACS exit steps
- » Programming ACS exits
- » ACS exit parameter structure
- » Actions in ACS exits
- » ACS routines - hands-on exercises

DFSMS Set-up & Control

- » Control Data Sets
- » sizing SMS Control Data Sets
- » defining Control Data Sets
- » Control Data Set application selection
- » SCDS base definition panel
- » IGDSMSxx
- » IEFSSNxx
- » activating SMS
- » SETSMS command
- » SMS- related commands
- » displaying SMS information
- » displaying Storage Group information
- » displaying SMS volume information
- » displaying device information

- » Start/Restart SMS address space
- » recovering ACDS
- » recovering COMMDS
- » enhanced ISMF

HSM Functional Overview

- » HSM as part of SMS
- » Key commands
- » Migration types
- » Defining ML1 volumes
- » Small data set packing
- » Secondary migration
- » Controlling migration from MLO
- » Interval Migration
- » Command migration
- » Recalling datasets
- » Recall process
- » Backup flow
- » Backup control
- » Command backup – volume
- » BACKVOL examples
- » Backup command
- » Controlling command backup - SETSYS DSBACKUP
- » Controlling command backup - ML1 overflow
- » Command backup - dataset