HSM Implementation & Customisation

Learn via: **Classroom**

Duration: **2 Gün**

https://bilginc.com/tr/egitim/hsm-implementation-and-customisation-3172-egitimi/

Overview

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

This course is also available for one-company, on-site presentations and for live presentation over the Internet, via the Virtual Classroom Environment service.

Prerequisites

A sound understanding of z/OS at a conceptual level and familiarity with using JCL and the utility programs.

What You Will Learn

- implement migration and recall
- implement backup/recovery
- describe HSM performance issues and tune HSM
- issue (and understand) HSM commands
- implement disaster backup and recovery
- evaluate and implement ABARs
- utilise FIXCDS and PATCH commands.

Outline

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 data set packing; Defining ML2 volumes; Controlling daily migration; Secondary migration - cleanup of ML1 & MCDS; Migration from ML0; 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

Back-up flow; Back-up events; Back-up volume definitions; Back-up control; CDS back-up; CDS recovery utility; Back-up data set naming; Back-up to DASD; Command back-up - volume; BACKVOL examples; Back-up command; Controlling command back-up - SETSYS DSBACKUP; Controlling command back-up - ML1 overflow; Command back-up - data set; Back-up support; Inline back-up; Data set recovery; Back-up performance summary; Deleting unwanted back-ups; 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; ARCPRLOG output; ARCPEDIT output; Controlling tape mounts; Tape selection/seletion 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 back-up volumes; List data set information from MCDS; List data set Information from BCDS; List data set 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.

HSM Exits

HSM available user exits; Invoking user exits; ARCMVEXT: space management volume exit; ARCMDEXT: data set migration exit; ARCADEXT: data set deletion exit; ARCBDEXT: data set back-up exit; ARCRDEXT: recall exit; ARCCDEXT: data set reblock exit; ARCTDEXT: tape data set exit; ARCTVEXT: tape volume exit; ARCCBEXT: Control Data Set back-up exit; ARCINEXT: initialization exit; ARCMMEXT: second level migration data set exit; ARCSAEXT: space management & back-up exit; ARCRPEXT: return priority exit; Installing EXITS.

Startup & Monitoring

HSM start-up procedure; HSM start-up options; Defining Control Data Sets; Multicluster Control Data Sets; VSAM Record Level Sharing (RLS); Requirements for CDS RLS serialisation; 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.