z/OS VSAM and Access Method Services

Längd: 4 Days   Kurskod: SS83G

Sammanfattning:

This course is designed to teach how to manage VSAM and non-VSAM data sets by coding and using the functions and features of the Access Method Services program, IDCAMS. To reinforce the lecture material, machine exercises are provided that enable students to code and test selected IDCAMS commands such as DEFINE, REPRO, ALTER, and LSCAT.

Learn to manage Virtual Storage Access Method (VSAM) and non-VSAM data sets. Particularly emphasize coding and using the functions of the IDCAMS program. Lab exercises enable you to code and test selected IDCAMS commands, such as DEFINE, REPRO, ALTER, and LISTCAT.

Hands-On Labs

Eight labs are included to address:

• IDCAMS commands, including ALTER, DEFINE, CLUSTER, EXPORT, IMPORT, EXAMINE, LISTCAT, REPRO, and PRINT
• Tuning VSAM and the VSAM buffers
• Alternate indexes

Målgrupp:

This is an intermediate course for individuals who manage data sets using IDCAMS and VSAM.

Målsättning:

- Understand the structure and use of VSAM data sets or clusters
- Code IDCAMS commands to define and load VSAM clusters
- Code IDCAMS commands to define and load alternate indexes
- Code IDCAMS commands to list, alter, and delete catalog entries
- Code IDCAMS commands to print data sets
- Code IDCAMS commands to list, alter, and delete catalog entries
- Code IDCAMS commands to print data sets
- Code the Job Control Language (JCL) for IDCAMS and programs which process VSAM clusters
- Use IDCAMS and JCL options to improve the performance of a VSAM job
- Reorganize, back up, and recover VSAM and non-VSAM data sets
- Interpret an IDCAMS listing of an Integrated Catalog Facility (ICF) catalog
- Select and use the appropriate documentation to utilize VSAM and IDCAMS

Förkunskaper:

You should complete:

• z/OS Facilities (ES15)
• z/OS Job Control Language and Utilities (ES07) or
• Fundamental System Skills in z/OS (ES10)
• or have equivalent experience
**Innehåll:**

| Introduction to VSAM data sets | •discuss the meaning and use of SHAREOPTIONS | •explain the advantages and disadvantages of EXPORT / IMPORT |
| •describe the structure, organization, and use of VSAM clusters | •discuss the need for serialization of updates to a data set | •explain the advantages and disadvantages of DFSMS Data Set Services (DFSMSdss) DUMP / RESTORE |
| •explain the function of Control Intervals (CI) and Control Areas (CA) | •describe how ENQ/DEQ macros are used to serialize data set updates in multiregion and multisystem environments | •explain the advantages and disadvantages of DFSMS Hierarchical Storage Management (DFSMShsm) HBACKDS / HRECOVER |
| •describe the purpose of CI splits and CA splits and how they are accomplished | •explain the impact of buffering and SHAREOPTION modifications | •discuss backup frequency |
| •estimate DASD space requirements for various cluster types | •explain VSAM record level sharing | •determine when reorganization is required |

**ICF catalogs**

| •discuss the use of the ICF catalog | •use the VSAM integrity and security options: RECOVERY, ERASE, VERIFY, and passwords | •code the AMS commands for backup, recovery, and reorganization |
| •describe the structure, purpose, and basic contents of the master catalog | •compare VSAM passwords with Resource Access Control Facility (RACF) security | Linear Data Sets (LDS) |
| •describe how the master catalog is located at initial program load (IPL) time | •explain the use of CI and CA FREESPACE | •explain the use of the DIV macro to access LDS |
| •discuss the structure, purpose, and basic contents of user catalogs | •discuss the performance impact of cache | •discuss candidates for LDS |
| •create the ICF catalogs | •describe the space allocation process with KEYRANGES and multivolume data sets | Management and problem analysis aids |
| •describe the catalog search | •explain the contents of an Index CI | •explain the use of the DCOLLECT command to gather management and planning information about the storage subsystem |
| •discuss and create the two types of alias | •explain how VSAM key compression works | •discuss tools used to identify and trace VSAM errors |

**IDCAMS commands, part 1**

| •discuss the IDCAMS program | IDCAMS ALTER | •code the AMS EXAMINE command to test the structure of a Key Sequenced Data Set (KSDS) |
| •code the JCL to run IDCAMS | •explain the basic functions of the ALTER command | •interpret EXAMINE output to determine how to recover from a KSDS structural error |
| •code the DEFINE CLUSTER command to create specific VSAM data set organizations | •code the ALTER command to modify options for processing existing VSAM objects | •invoke the Generalized Trace Facility (GTF) to track VSAM-related events |
| •code the LISTCAT command to format and print entries from the catalog | •code the ALTER command to modify options for buffering, FREESPACE, SHAREOPTIONS and passwords | |

**JCL for VSAM**
• explain creation and deletion of VSAM clusters using JCL and the DFSMS data class facility
  • describe the reasons for using an alternate index
  • invoke utilities to print GTF trace output
  Local and global shared resources

• describe the additional JCL parameters that support VSAM clusters
  • discuss the basic contents of an alternate index
  • explain techniques to conserve virtual storage by sharing buffers and control blocks

• discuss the purpose of data class
  • use a PATH to process base cluster records directly and in alternate key sequence
  • discuss the concept of shared resource pools

• explain the assignment of data class through JCL and the Automatic Class Selection (ACS) routines
  • define and load an alternate index
  • discuss the advantages and disadvantages of Local Shared Resources (LSR)

IDCAMS commands, part 2
  • explain the impact of SHAREOPTIONS when opening a base cluster and associated alternate indices
  • discuss the advantages and disadvantages of Global Shared Resources (GSR)

• describe the function of REPRO, PRINT and DELETE commands
  • explain programming and JCL considerations
  • describe macros that control use and allocation of shared resources

• use REPRO to load and back up a VSAM cluster
  Advanced functions and extended format data sets
  • explain VSAM advanced functions, extended format data sets, and their major features
  CICS VSAM recovery

• use PRINT to print a VSAM cluster in various formats
  • explain data stripping
  • describe the major functions of CICS VSAM recovery

• use DELETE to remove the catalog entry for the data set and scratch the data set from the volume
  • explain compression
  • explain the concept of transaction processing, backup, and recovery

• describe and code modal commands to provide for conditional execution of Access Method Services (AMS) statements
  • explain multivolume allocation options
  • explain how to implement and manage CICS VSAM recovery

Buffering
  • explain extended addressability
  • explain how to implement and manage CICS VSAM recovery

• explain how buffer space may impact performance either positively or negatively
  • explain system managed buffering
  Application coding considerations

• explain the use of data and index buffers in sequential processing and direct processing
  • explain partial space release
  • describe VSAM processing terminology

• evaluate the use of JCL Access Method Parameters (AMP) keywords to manage buffers
  Data set reorganization, backup, and recovery
  • explain space constraint relief
  • define various VSAM processing options

• code the buffer keywords on the Dataset Definition (DD) statement
  • explain the need for data set backup
  • explain the merge of catalog entries, JCL parameters, and program definitions that determine processing options

VSAM integrity and security
  • explain the advantages and disadvantages of REPRO
  • discuss VSAM programming support, and JCL requirements in Common Business Oriented Language (COBOL), Programming Language One (PL/I), and Assembler languages

• explain how integrity and security is
Övrig information:

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