

Course : IBM z/OS VSAM and Access Method Services (SS83G)

Official IBM course

Practical course - 4d - 28h00 - Ref. SS8

Price : 3570 € E.T.

With this course, you'll learn how to effectively manage VSAM and non-VSAM datasets by coding and using the functions and features of the Access Method Services program, IDCAMS. Through hands-on exercises, you will code and test selected IDCAMS commands such as DEFINE, REPRO, ALTER and LISTCAT.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Comprendre la structure et l'utilisation des ensembles de données ou des clusters VSAM
- ✓ Coder les commandes IDCAMS pour définir et charger des index alternatifs
- ✓ Code IDCAMS commands to list, modify and delete catalog entries
- ✓ Coder les commandes IDCAMS pour imprimer des ensembles de données
- ✓ Coder le langage JCL (Job Control Language) pour IDCAMS et les programmes qui traitent les clusters VSAM
- ✓ Utiliser les options IDCAMS et JCL pour améliorer les performances d'un job VSAM
- ✓ Réorganiser, sauvegarder et restaurer des ensembles de données VSAM et non-VSAM
- ✓ Interpréter un listing IDCAMS d'un catalogue ICF (Integrated Catalog Facility)
- ✓ Select and use the appropriate documentation for VSAM and IDCAMS
- ✓ Code IDCAMS commands to define and load VSAM clusters
- ✓ Calculate direct-access storage device (DASD) space requirements for VSAM clusters

Intended audience

Professionnels IT qui gèrent des ensembles de données à l'aide d'IDCAMS et de VSAM.

PARTICIPANTS

Professionnels IT qui gèrent des ensembles de données à l'aide d'IDCAMS et de VSAM.

PREREQUISITES

Completion of "z/OS Installations (ES15)", "z/OS Job Control Language and Utilities (ES07)" or "Fundamental System Skills in z/OS (ES10)" or equivalent.

TRAINER QUALIFICATIONS

The experts who lead the training courses are specialists in the subjects covered. They are approved by the publisher and certified for the course. They have also been validated by our teaching teams in terms of both professional knowledge and teaching skills for each course they teach. They have at least three to ten years of experience in their field and hold or have held positions of responsibility in companies.

Prerequisites

Completion of "z/OS Installations (ES15)", "z/OS Job Control Language and Utilities (ES07)" or "Fundamental System Skills in z/OS (ES10)" or equivalent.

Practical details

Teaching methods

Training in French. Official course material in digital format and in English. Good understanding of written English.

Course schedule

1 Introduction aux ensembles de données VSAM

- Décrire la structure, l'organisation et l'utilisation des clusters VSAM.
- Expliquer la fonction des intervalles de contrôle (IC) et des zones de contrôle (ZC).
- Décrire le but des divisions CI et CA et comment elles sont réalisées.
- Estimate DASD space requirements for different types of cluster.

2 ICF Catalogues

- Discuter de l'utilisation du catalogue ICF.
- Décrire la structure, le but et le contenu de base du catalogue principal.
- Décrire comment le catalogue principal est situé au moment du chargement initial du programme (IPL).
- Discuss the structure, purpose and basic content of user catalogs.
- Créer les catalogues ICF.
- Describe the catalog search.
- Discuss and create the two types of alias.

3 IDCAMS commands - Part 1

- Presentation of the IDCAMS program.
- Coder le JCL pour exécuter IDCAMS.
- Code the DEFINE CLUSTER command to create specific VSAM dataset organizations.
- Code the LISTCAT command to format and print catalog entries.

4 JCL for VSAM

- Explain how to create and delete VSAM clusters using JCL and the DFSMS data class function.
- Describe the additional JCL parameters that support VSAM clusters.
- Discuss the purpose of the data class.
- Explain data class assignment via JCL and automatic class selection (ACS) routines.

ASSESSMENT TERMS

Assessment of targeted skills prior to training.

Assessment by the participant, at the end of the training course, of the skills acquired during the training course.

Validation by the trainer of the participant's learning outcomes, specifying the tools used: multiple-choice questions, role-playing exercises, etc.

At the end of each training course, ITTCERT provides participants with a course evaluation questionnaire, which is then analysed by our teaching teams. Participants also complete an official evaluation of the publisher.

An attendance sheet for each half-day of attendance is provided at the end of the training course, along with a certificate of completion if the participant has attended the entire session.

TEACHING AIDS AND TECHNICAL RESOURCES

The teaching resources used are the publisher's official materials and practical exercises.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training course.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you have specific accessibility requirements? Contact Ms FOSSE, disability advisor, at the following address: psh-accueil@orsys.fr so that we can assess your request and its feasibility.

5 IDCAMS commands - Part 2

- Décrire la fonction des commandes REPRO, PRINT et DELETE.
- Utiliser REPRO pour charger et sauvegarder un cluster VSAM.
- Utiliser PRINT pour imprimer un cluster VSAM dans différents formats.
- Utiliser DELETE pour supprimer l'entrée de catalogue pour l'ensemble de données.
- Code modal commands to enable conditional execution of Access Method Services instructions.

6 Buffering

- Explain how buffer space can have a positive or negative impact on performance.
- Expliquer l'utilisation de tampons de données et d'index dans le traitement séquentiel et le traitement direct.
- Evaluate the use of JCL Access Method Parameters (AMP) keywords to manage buffers.
- Encode the buffer keywords in the dataset definition (DD) instruction.

7 Integrity and safety VSAM

- Explain how integrity and safety are maintained.
- Discuter de la signification et de l'utilisation de SHAREOPTIONS.
- Discuss the need to serialize updates to a data set.
- ENQ/DEQ macros for serializing dataset updates in multi-region environments.
- ENQ/DEQ macros for serializing data set updates in multi-system environments.
- Explain the impact of buffering and SHAREOPTION modifications.
- Describe VSAM record level sharing.
- Use VSAM integrity and security options: RECOVER, DELETE, VERIFY and passwords.
- Compare VSAM passwords with Resource Access Control Facility (RACF) security.

8 Settings

- Explain the use of CI and CA FREESPACE.
- Discuss the impact of caching on performance.
- Décrire le processus d'allocation d'espace avec KEYRANGES et des ensembles de données multi-volumes.
- Explain the contents of a CI index.
- Expliquer comment fonctionne la compression de clé VSAM.

9 IDCAMS AUTHENTICATES

- Explain the basic functions of the ALTER command.
- Code the ALTER command to modify the processing options of existing VSAM objects.
- Code ALTER command to modify buffering options, FREESPACE, SHAREOPTIONS ...

10 Alternative indexes

- Describe the reasons for using an alternative index
- Discuss the basic content of an alternative index.
- Use a PATH to process base cluster records directly in an alternative key sequence.
- Define and load an alternative index.
- Explain the impact of SHAREOPTIONS when opening a base cluster and associated alternative indices.
- Explain programming and JCL considerations.

11 Fonctions avancées et ensembles de données au format étendu

- Expliquer les fonctions avancées de VSAM.
- Explain extended format data sets and their main features.
- Explain data deletion.
- Explain compression.
- Explain multi-volume allocation options.
- Explain Extended Addressability.
- Expliquer System-Managed Buffering.
- Expliquer Partial Space Release.
- Expliquer Space Constraint Relief.

12 Reorganize, back up and restore data sets

- Describe the need for a data set backup.
- Explain the advantages and disadvantages of REPRO.
- Explain the advantages and disadvantages of EXPORT/IMPORT.
- Explain the advantages and disadvantages of DFSMS Data Set Services (DFSMSdss) DUMP / RESTORE.
- Explain the advantages and disadvantages of DFSMS Hierarchical Storage Management (DFSMSHsm) HBACKDS / HRECOVER.
- Discuss backup frequency.
- Determine when a reorganization is necessary.
- Code AMS commands for backup, recovery and reorganization.

13 Linear Data Sets (LDS)

- Describe Data-In-Virtual (DIV).
- Explain the structure and use of LDS.
- Explain how to use the DIV macro to access LDS.
- Discuss candidates for LDS.

14 Help with problem management and analysis

- Explain how to use the DCOLLECT command to collect management information.
- Explain the use of DCOLLECT to collect planning information on the storage subsystem.
- Discuss the tools used to identify and trace VSAM errors.
- Coder la commande AMS EXAMINE pour tester la structure d'un ensemble de données séquencées clés (KSDS)
- Interpret the EXAMINE output to determine how to recover from a KSDS structural error.
- Invoke the Generalized Trace Facility (GTF) function to track VSAM-related events.
- Invoquer des utilitaires pour imprimer la sortie de trace GTF.

15 Shared local and global resources

- Explain techniques for maintaining virtual storage by sharing buffers and control blocks.
- Discuss the concept of shared resource pools.
- Discuss the advantages and disadvantages of local shared resources (LSR).
- Discuss the advantages and disadvantages of global shared resources (GSR).
- Describe the macros that control the use and allocation of shared resources.
- Discuss the specification and monitoring of shared buffer allocation in CICS and IMS.

16 CICS VSAM Recovery

- Describe the main functions of CICS VSAM Recovery.
- Explain the concept of transaction processing, backup and recovery.
- Explain how to implement and manage CICS VSAM Recovery.

17 Application coding considerations

- Describe VSAM treatment terminology.
- Définir diverses options de traitement VSAM.
- Expliquer la fusion des entrées de catalogue, des paramètres JCL.
- Explain the program definitions that determine treatment options.
- Support for VSAM programming and JCL requirements in COBOL languages, etc.
- Describe JCL and programming requirements for COBOL, PL/I and Assembler.

Dates and locations

REMOTE CLASS

2026 : 23 June, 15 Dec.

PARIS LA DÉFENSE

2026 : 23 June, 15 Dec.