

z/OS System Programmer Fundamentals

Durée: 4 Jours **Réf de cours: ES40G** **Méthodes d'apprentissage: Classe à distance**

Résumé:

This course is designed to describe the basic components that apply to all z/OS systems. It includes high level concepts that apply to the z/OS hardware platform and the z/OS software. It then provides a more detailed analysis, description and lab activities that can be applied to the system programmer role to maintain z/OS systems.

Discussion activities include: The POR, IPL process, JES implementation and operating environment, VTAM environment for TSO, ISPF, SNA and TCP/IP networking, RACF, ISPF/PDF and UNIX System Services. It defines the classic approach to data management in a z/OS system. It identifies various software products and utilities used to define, maintain, and manage catalogs and data sets in the z/OS environment.

It also discusses Parmlib usage and requirements for system initialization and operation that include: System symbolics, WLM, SFM, RMF and system logger. Both single system and multi-system sysplex usage is identified. z/OS install, upgrade options, maintenance using SMP/E and I/O configuration requirements using HCD is listed and described.

Mis à jour 9/1/2025

Classe à Distance - site Client

Cette formation peut être suivie à distance en synchrone depuis n'importe quel site pourvu d'une connexion internet (2 Mb/s en symétrique recommandés). Le programme (théorie et pratique) suit le même déroulé pédagogique qu'en présentiel. La solution technologique adoptée permet aux apprenants à distance de suivre les présentations faites au tableau, de voir et d'entendre l'instructeur et les participants en temps réel, mais également d'échanger avec eux.

Public visé:

This intermediate class is intended for new System Programmers and System Administrators, who require an overall understanding of the z/OS platform, z/OS components, data management, and installation and maintenance activities used in z/OS systems.

Objectifs pédagogiques:

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| ■ After this course participants should be able to: | ■ IDCAMS utility |
| ■ Describe the basics of z/OS architecture | ■ DFSMS: DFSMSdss, DFSMSHsm |
| ■ Identify basic components of a z/OS system | ■ Data, storage, and management classes |
| ■ Discuss what you have learned about LPARs | ■ Define the hierarchical data management |
| ■ Describe maintenance principles | ■ HFS file system |
| ■ Identify and list the POR process | ■ zFS file system |
| ■ Describe the IPL process | ■ Define load-parameters for IPL |
| ■ Identify the basic address spaces | ■ Define symbols for use in system initialization |
| ■ Describe how to shut down z/OS | ■ Define a configuration for system initialization |
| ■ Implement a basic JES2 batch environment | ■ Define a library for procedures |
| ■ Identify how work can be started in z/OS and it's relationship to the job entry subsystem | ■ Identify the sysplex resources required to run WLM |
| ■ Describe how JES2 prepares and executes work in z/OS | ■ List the main components that comprise a WLM service definition for a system/sysplex |
| ■ Explain JES2 start options | ■ Describe the function of WLM service definition parameters such as workloads, service goals, periods, and WLM subsystems |
| ■ Describe JES2 parameters that can be customized to support z/OS batch | ■ Describe how SMF data set are created and used |

- Identify how communications and control of JES2 can be done using the operator commands and SDSF
- Describe JES3 configuration and job processing phases
- Identify JES3 start options
- Describe the two networking schemes in the z/OS environment: SNA and IP
- Identify SNA networking resources
- Explain how SNA sessions are established
- Describe the role of TCP/IP as a physical filesystem in UNIX System Services
- Implement and start a local VTAM instance to provide the base for SNA applications such as TSO
- Implement and start TSO
- Start a TCPIP stack and check accompanying messages
- Identify the main functions of Security Server (RACF) and the role it plays in controlling user access to the system
- Describe the contents of RACF user, group, and resource profiles
- Describe how RACF profiles are used to authorize user access to a data set resource
- Identify two key members used for TCAS startup
- Name the components of ISPF
- Describe the general layout of ISPF/PDF panels
- Describe how UNIX System Services are used in z/OS
- Describe briefly the UNIX Shell and utilities and how they are accessed
- Describe the application services provided in UNIX System Services
- Describe how security is handled in UNIX System Services
- Describe the classical z/OS data management
- DASD init: VTOC, VTOC index
- ICF catalog creation: BCS, VVDS
- MCAT/UCAT
- Explain SMF record types and how they are used
- Identify the three RMF monitor types
- Describe how the RMF monitor is used for reporting purposes
- Identify System Logger components and usage for:
 - Sysplex configuration and CF logstreams
 - Single system and DASD-only logstreams
- Describe SMF usage of logstreams
- Describe the differences between IOCDs and IODF
- Identify and list the HCD definition process sequence
- Describe how the HCD dialogs are used to define a configuration
- Discuss the purpose of Hardware Configuration Manager
- Describe the overall concept of SMP/E: Global, target and DLIB zones
- Describe what elements and SYSMODs are
- Create an SMP/E working environment
- Identify the batch and ISPF interfaces to SMP/E
- Install a user function using RECEIVE, APPLY, and ACCEPT
- Explain how to remove a SYSMOD with RESTORE
- Describe the installation options available to install z/OS
- Use the attributes of z/OS elements and features to identify the contents of a z/OS product
- Describe the contents of the ServerPac offering and important install documentation sources
- List the main steps in the ServerPac build process
- Describe hardware and software prerequisites for performing a ServerPac installation in:
 - The driving system
 - The target system

Pré-requis:

You should:

- Have z/OS installation experience or have attended z/OS Installation (ES41A)
 - Be familiar with end user activities on MVS, including knowledge of JCL, IDCAMS, the MVS address space structure, and the concept of batch scheduling using JES initiators
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Contenu:

Day 1

- Welcome
- Unit 1 - What makes up a z/OS system?
- Exercice 1- Introduction to z/OS setup
- Unit 2 - System boot: POR and IPL
- Exercice 2 - Complete the IPL: Start JES, start networking
- Unit 3 - Processing user work with z/OS
- Exercice 3 - LOGON into TSO and create a new user profile

Day 2

- Unit 4 - Networking, z/OS communication server
- Exercice 4 - Data administration
- Unit 5 - What else is needed for end user access to the system?
- Exercice 5 - Automate startup and monitor the system

Day 3

- Unit 6 - Data management
- Exercice 6 - System logger
- Unit 7 - A closer look at IPL: IPLPARM, SYS1.PARMLIB, SYS1.PROCLIB
- Exercice 7- Define a string of DASD and ACTIVATE dynamically

Day 4

- Unit 8 - System management: WLM, SMF, RMF, and system logger
- Exercice 8 - Install and maintain a user function
- Unit 9 - Hardware configuration definition
- Unit 10 - Software maintenance: SMP/E
- Unit 11 - Change management: ServerPac and other IBM services

Méthodes pédagogiques :

Official course book provided to participants

Autres moyens pédagogiques et de suivi:

- Compétence du formateur : Les experts qui animent la formation sont des spécialistes des matières abordées et ont au minimum cinq ans d'expérience d'animation. Nos équipes ont validé à la fois leurs connaissances techniques (certifications le cas échéant) ainsi que leur compétence pédagogique.
- Suivi d'exécution : Une feuille d'émargement par demi-journée de présence est signée par tous les participants et le formateur.
- En fin de formation, le participant est invité à s'auto-évaluer sur l'atteinte des objectifs énoncés, et à répondre à un questionnaire de satisfaction qui sera ensuite étudié par nos équipes pédagogiques en vue de maintenir et d'améliorer la qualité de nos prestations.

Délais d'inscription :

- Vous pouvez vous inscrire sur l'une de nos sessions planifiées en inter-entreprises jusqu'à 5 jours ouvrés avant le début de la formation sous réserve de disponibilité de places et de labs le cas échéant.
- Votre place sera confirmée à la réception d'un devis ou "*****booking form*****" signé. Vous recevrez ensuite la convocation et les modalités d'accès en présentiel ou distanciel.
- Attention, si cette formation est éligible au Compte Personnel de Formation, vous devrez respecter un délai minimum et non négociable fixé à 11 jours ouvrés avant le début de la session pour vous inscrire via moncompteformation.gouv.fr.

Accueil des bénéficiaires :

- En cas de handicap : plus d'info sur globalknowledge.fr/handicap
- Le Règlement intérieur est disponible sur globalknowledge.fr/reglement