



BMC Mainframe: IBM Z Systems Environment - Introduced & Explained

COURSE ABSTRACT

COURSE CODE

» MGRS-IZSI-2021

APPLICABLE VERSIONS

» Not Applicable

DELIVERY METHOD

» Instructor-led Training (ILT)

COURSE DURATION

» 2 Days

PREREQUISITES

» NA

RECOMMENDED TRAININGS

» NA

Course Overview

The course is developed and delivered by © RSM Technology.

This two-day course is the essential introduction to Z Systems - IBM's mainframe-based enterprise computing environments, and to IBM's flagship operating system, z/OS.

The course introduces the concepts and terminology that are encountered and used by IS personnel every day and explains them in an easily understandable manner.

This course provides a firm foundation for anyone moving into the world of IBM Z Systems mainframe-based computing.

Target Audience

All new and trainee programmers, operators, and technicians, as well as non-technical staff working in an IT environment who require a background understanding of IBM's Z Systems.

Learner Objectives

- » List the principal components found in IBM Z Systems environments
- » Describe how data is stored, the different data codes and types, and the devices used
- » Explain the concepts of operating systems
- » Describe the IBM mainframe operating systems and their associated software, as available in IBM Z Systems
- » Describe the functions carried out in Z Systems based IS departments
- » Understand the different numbering systems and representations used in Z Systems



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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

The Mainframe Computer

- » Origins
- » Types of computers
- » General purpose
- » Scientific
- » Scientific AND general purpose?
- » The PC
- » The Graphical User Interface (GUI)
- » The application development backlog
- » The Local Area Network (LAN)
- » Who runs the distributed data center?
- » Total Cost of Ownership (TCO)
- » Today's real world
- » What is a mainframe?
- » What can it do?
- » Hardware and software
- » Types of computing
- » Batch
- » Batch processing today
- » Interactive
- » On-line
- » Real time

Enterprise Computing Hardware

- » Enterprise computing hardware

- » An IBM mainframe computer room and its contents
- » The processor complex
- » Parallel sysplex
- » Logical partitions
- » Channels; Controllers
- » I/O units
- » Addressing
- » Local and remote
- » Disk storage
- » Old technology
- » Storing data on a traditional disk
- » The cylinder concept
- » Sectors
- » Cache storage
- » RAID - a newer technology
- » Disk Mirroring (RAID-1)
- » Data Striping (RAID 5/6)
- » Remote Disk copy
- » Virtual disks
- » Why magnetic tape?
- » Tape cartridges
- » High performance tapes
- » Automated Tape Libraries
- » Virtual Tape Servers
- » Other Input/output peripherals

Z Systems Programs

- » Static Enterprise computing hardware
- » What is software?
- » Types of software
- » System software
- » Exits
- » Application software
- » What does a program comprise?
- » Main module
- » Subroutines and procedures
- » Functions
- » Data
- » EBCDIC
- » ASCII
- » Building a program
- » Programming languages
- » Executing a program

Z Enterprise Organization

- » Who runs the IT environment?
 - Operators
 - Help Desk Operatives
 - Security Administrators
 - Systems Programmers
 - Storage Administrators

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COURSE ABSTRACT

- Network Analysts
- Application Developers/Support
- Database Administrators

The Z Systems' Operating Systems

- » Z Systems operating systems
- » z/OS operating systems
- » zVM operating systems
- » z/VSE operating systems
- » Linux operating systems
- » z/TPF operating systems

z/OS Operating System

- » The z/OS operating system
- » Some important definitions
- » Address spaces
- » Common area

- » Private area
- » Main components of MVS
- » MVS processing environments
- » On-line
- » TSO
- » z/OS communications server
- » VTAM
- » TCP/IP
- » JES2
- » Transaction Servers:
 - CICS
 - IMS
- » Databases:
 - Db2
 - IMS
- » UNIX System Services

- » WebSphere Application Server

Numbering Systems

- » Numbering systems
- » Decimal arithmetic
- » Binary arithmetic
- » Binary subtraction
- » Negative binary numbers
- » 2's complement
- » Hexadecimal arithmetic
- » Hexadecimal/binary relationship
- » Extended Binary Coded Decimal Interchange Code
- » Packed decimal numbers
- » Memory addressing