BMC Mainframe: Mainframe Networks - An Introduction

COURSE ABSTRACT

COURSE CODE

» MGRS-MANI-2021

APPLICABLE VERSIONS

» Not Applicable

DELIVERY METHOD 🌐

» Instructor-led Training (ILT)

COURSE DURATION 🌐

» 2 Days

PREREQUISITES

» Familiarity with the z/OS environment and the ability to use TSO/ISPF

RECOMMENDED TRAININGS

» NA

Course Overview

The course is developed and delivered by © RSM Technology.

This two-day course introduces mainframe personnel to networks in a Z Systems environment. The course describes mainframe networks at a conceptual and terminological level, giving attendees a sufficient depth of detail to enable them to discuss issues relating to their organization's networks with confidence and understanding.

The course introduces the important aspects of SNA, VTAM, APPN and TCP/IP, and explains their relationships. Attendees are also taught about the use of Console commands and how to use TSO commands to interrogate a TCP/IP network.

Several practical, hands-on exercises are included throughout the course.

Target Audience

» Operators
» Operations Analysts
» Others working in a z/OS based computing environment

Learner Objectives

» Understand the concepts of SNA/VTAM/APPN
» Understand and use the terminology of SSCP, CP, EN, NN, LEN, LU and PU
» Describe addressing in SNA/VTAM/APPN and TCP/IP
» Explain how TCP/IP fits into z/OS, especially for VTAM and TCP/IP applications
» Stop and start VTAM, TCP/IP and TN3270
» Use the z/OS commands to interrogate a SNA/VTAM/APPN and TCP/IP network
» Use the TSO commands to interrogate a TCP/IP network (e.g. NETSTAT, PING, etc.)

For more information about BMC Education Services, visit **www.bmc.com/education**.

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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

Introduction to SNA
» What is SNA?
» Pre-SNA networks
» SNA hardware and software
» SNA elements
» Sessions
» SNA layers
» SNA message units
» Session establishment sequence
» Why APPN?
» APPN node types
» Resource registration
» Resource location
» LU-LU session activation
» Locating resources

Network Addressable Units
» SNA Network Addressable Units (NAUs)
» SSCP/CP functions
» PU types
» Message flow
» Address awareness
» Subarea network addresses
» APPN network address
» Local addresses

» Address conversion

SNA Sessions
» Static Sessions and half-sessions
» Half session layers
» Session types
» Setup flows
» Initiation sequences
» Logon request processing
» LU-LU session types

Console Commands
» The START command
» The DISPLAY command
» The VARY command
» The MODIFY command
» The HALT command

TCP/IP Overview
» What is TCP/IP?
» Why are we interested in TCP/IP?
» What does TCP/IP comprise?
» Internetworking principles
» IPv4 addressing
» IPv4 subnetting
» IPv4 variable subnetting

» Network Address Translation
» One to One NAT
» Network Address Port Translation (NAPT)
» TCP/IP protocol stack
» IPv4 Address Resolution Protocol
» IPv4 Dynamic Host Configuration Protocol
» Why IPv6?
» IPv6 addressing
» IPv6 prefixes and address types
» Global unicast address format
» Anycast address
» Multicast address
» Required host information
» Port numbers
» IPv4 Transport Protocol message formats
» IPv4 Internet Protocol:
   - Message format
   - Packet format
   - Header format
» Extension Headers

An Overview of TCP/IP on z/OS
» TCP/IP for z/OS
» TCP/IP access to SNA applications
» How the gateway works

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» SNA access to TCP/IP applications
» Communications Storage Manager
» Device connectivity and attachments
» Direct vs indirect attachment
» Direct attachment problem
» Virtual IP addressing - the solution

» Sharing attachments across LPARs
» UNIX Systems Services considerations

TCP/IP for z/OS - Command Overview
» Available TCP/IP commands
» The START and STOP commands

» The MODIFY command
» The DISPLAY command
» The VARY command
» The OBEYFILE command
» The NETSTAT and onetstat commands
» NETSTAT command options

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