TCP/IP Networking Concepts and z/OS Configuration

Course Summary

Description

This course provides the fundamentals of TCP/IP network operations to systems programmers and I/T professionals. Topics include basic networking, TCP/IP architecture, TCP/IP functions in use in z/OS.

Topics

- Introduction to Networking
- TCP/IP Overview
- TCP/IP Configuration Overview
- TCP/IP Customization
- Routing and VIPA
- Application Customization
- VTAM Overview
- Start Up Options and Configuration List LAB
- Connecting APPN Nodes to VTAM
- APPN and LEN Node Structure
- APPN Services
- TCP/IP and VTAM Commands

Audience

This course is designed for systems programmers and analysts that need a better understanding of the TCP/IP environments.

Duration

Five days

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Course Outline

I. Introduction to Networking
- A. Define functions of gateways, front-end processors
- B. Explain network bridges and routers
- C. Examine networking protocols concepts.
- D. Review use of modems, multiplexors, concentrators, and other connection mechanisms
- E. Review network connectivity issues

II. TCP/IP Overview
- A. Introduction to the TCP/IP protocol stack, MPC I/O processes, and CSM.
- B. Review connectivity and gateway functions supported by Communications Server.
- C. Examine networking protocols using IPv4 or IPv6.
- D. Review files systems and application interfaces.
- E. Examine TCP/IP packaging for z/OS.

III. TCP/IP Configuration Overview
- A. UNIX System Services concepts and file structure.
- B. Understanding Resolvers.
- C. Configuration files for the TCP/IP stack and search orders.
- D. Configuration files for TCP/IP applications.
- E. Review consideration for Enterprise Extender, VIPA, and multiple instances of TCP/IP.

IV. TCP/IP Customization
- A. Configuring the syslog daemon.
- B. Configuring TCPIP.DATA and PROFILE.TCPIP.
- C. Configuring the local host table.
- D. Verifying the configuration

V. Routing and VIPA
- A. IPv4 and IPv6 overview.
- B. Dynamic versus Static routing.
- C. Routing verification.
- D. Dynamic versus Static VIPA
- E. OMPRoute (Open MVS MultiProtocol Routing Daemon).

VI. Application Customization
- A. Configuration and customization requirements for FTP.
- B. Domain Name System (DNS).
- C. Network management and SNMP configuration.
- D. Verifying the configuration.
- E. TELNET.

VII. TCP/IP Commands
- A. Basic TCP/IP and network commands

VIII. Overview
- A. Understand SNA concepts and definitions
- B. Examine SNA protocol stack
- C. Review basic VTAM/SNA function.
- D. Introduce subarea vs APPN networks

IX. Start Up Options and Configuration List LAB
- A. Review basic VTAM operation
- B. Review VTAM parameters for startup and configuration definitions
- C. Review VTAM buffering specifications

X. Connecting APPN Nodes to VTAM
- A. Basic examination of APPN/VTAM connectivity
- B. Introduce terminology for VTAM/APPN

XI. APPN and LEN Node Structure
- A. Examine basic components of node structure
- B. Examine methods of routing information
- C. Investigate particular structures pertinent to node management

XII. APPN Services
- A. APPN Services:
- B. Address Space Management
- C. Configuration Services
- D. Topology and Routine Services
- E. Directory Services
- F. Session Services

XIII. High Performance Routing (HPR)
- A. Examine High Performance Routing
- B. Review Adaptive Rate Based (ARB) flow control mechanism

XIV. VTAM Commands
- A. Basic VTAM and network commands

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