IBM Z/OS MAINFRAME TRAINING

1: Introduction to Mainframes and IBM Z/OS

- Overview of mainframe computing
- Introduction to IBM Z/OS operating system
- History and evolution of IBM mainframes

2: IBM Z Hardware Overview

- Architecture of IBM Z hardware
- Key components: CPU, storage, channels
- Parallel Sysplex and high availability concepts

3: IBM Z/OS System Components

- Job Management (JES)
- Address Spaces and Virtual Storage
- Time Sharing Option (TSO) and Interactive System Productivity Facility (ISPF)

4: IBM Z/OS File Systems

- Data Sets and VSAM (Virtual Storage Access Method)
- Hierarchical File System (HFS) and zFS (z/OS File System)

5: Networking and Communications

- TCP/IP and its implementation on Z/OS
- SNA (Systems Network Architecture)
- Network management on Z/OS
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- **6: Security on IBM Z/OS**

- RACF (Resource Access Control Facility)
- Security management and audit
- Encryption and data protection

7: Job Control Language (JCL)

- Syntax and structure of JCL
- Job execution on Z/OS
- Utilities and system commands

8: Performance Monitoring and Tuning

- Performance tools and monitors
- Tuning methodologies
- Capacity planning and management

9: Batch Processing and CICS

- Batch processing concepts
- CICS (Customer Information Control System)
- Online transaction processing (OLTP) on Z/OS

10: Maintenance and Upgrades

- Z/OS installation and maintenance
- Applying PTFs (Program Temporary Fixes)
- System upgrades and migration strategies

11: Disaster Recovery and Backup

- Backup and recovery strategies
- High availability solutions
- Disaster recovery planning

ADVANCE TOPICS ;-

1: Advanced System Architecture

- Symmetric Multiprocessing (SMP) architecture
- Parallel Sysplex and data sharing concepts
- Coupling Facility and its role in parallel processing

2: Advanced JCL and Job Management

- Conditional processing in JCL
- Symbolic parameters and overrides
- Job scheduling and automation with IBM Workload Scheduler

3: Advanced Storage Management

- DFSMS (Data Facility Storage Management Subsystem) overview
- Storage hierarchies and management classes
- DFSM Shsm (Hierarchical Storage Manager) for automated data migration

4: Advanced Networking and Communication

- TCP/IP performance tuning on IBM Z/OS
- VTAM (Virtual Telecommunications Access Method) configuration and management
- Parallel Sysplex networking considerations

5: Advanced Security and Compliance

- Advanced RACF administration and customization
- External security interfaces (ESI)
- Role-based access control (RBAC) implementation

6: Advanced Performance Monitoring and Tuning

- Performance tools: RMF (Resource Measurement Facility), SMF (System Management Facility)
- Workload Manager (WLM) for performance tuning
- Capacity planning for large-scale environments

7: Advanced Batch Processing and CICS

- Optimizing batch job performance
- Advanced CICS customization and transaction optimization
- WebSphere Application Server for z/OS integration

8: Advanced Problem Determination

- IPCS (Interactive Problem Control System) for dump analysis
- OMEGAMON tools suite for real-time monitoring and diagnostics
- Troubleshooting techniques and best practices

9: Advanced Disaster Recovery and Business Continuity

- GDPS (Geographically Dispersed Parallel Sysplex) overview
- Automation and orchestration of disaster recovery processes
- Implementing high availability across multiple data centers

10: Advanced Virtualization and Cloud Integration

- z/VM (Virtualization Manager) overview and implementation
- Docker and Kubernetes on IBM Z
- Cloud-native development with OpenShift on IBM Z