Advanced Parallel Sysplex Operations and Recovery Workshop

Duration: 5 Days Course Code: ES90G

Overview:

This course describes advanced operator actions to implement new policies, coupling facilities, structures and sysplex related operational enhancements.

It diagnoses problems and demonstrates recovery techniques in these areas. These include:

- Identifying HMC problems and recovery, including IPL problems during system and sysplex activation
- Recovery with and without SFM policies
- Couple data set failures
- CF and CF structure failures

Labs are provided to submit jobs to format CDS, define policies, start and verify that they are working as desired, identify any policy change pending conditions and correct as needed. Labs take students through the required steps to implement ECS, GRS star, JES checkpoint, Operlog, Logrec, and SM duplexing on the CF. Students will also identify potential problems during the implementation process, identify various CDS and other sysplex related problems. Students will remove a CF from the sysplex as in the case of required maintenance to a CF; add a new CF to the sysplex and perform system and CF failure and recovery scenarios.

Target Audience:

This intermediate course is for operations personnel, tech support staff, and system programmers who are directly involved in the operation, system support, and software support of their Parallel Sysplex environment.

Objectives:

- **After this course participants should be able to:**
- Use the HMC classic or tree UI:
- Identify and define operational usage of the HMC with CPC and IMAGE groups and objects
- Determine object status, build, identify, and assign activation profiles
- Describe the difference between:
- Base sysplex and a Parallel Sysplex
- Resource sharing and data sharing
- Identify and describe Parallel Sysplex hardware and software key components:
- Coupling facilities, couple data sets and STP hardware
- z/OS operating system, XCF and XES code
- IEASYSxx and COUPLExx statements used in a sysplex
- Describe how signaling is provided in a sysplex
- Describe structure types and usage by the CF
- Identify CF availability characteristics
- Identify recovery options for JES2 checkpoint
- Describe enhanced catalog sharing, operation and recovery considerations
- Explain the purpose of the system logger component in a sysplex
- Describe how Operlog and logrec can use logstreams and structures in a sysplex
- Identify CF logger recovery actions for system, CF logger failures
- Describe recovery terms and use for:
- Rebuild percent and SFM weights
- Structure and connector persistence
- Remove a coupling facility
- Activate CFRM policies
- Explain, identify and correct policy pending conditions
- List different command options to move structures in and out of CFs
- Define Reallocate command usage and benefits
- Identify structure hang recovery options
- Add an external CF to the sysplex

- Explain the difference between ICF and non-ICF configurations, benefits and availability requirements
- Describe system managed CF structure duplexing and its purpose
- Identify System z CF link connectivity options
- Internal and external CF link types and speeds, including PSIFB link options
- Identify commands to use to determine operational state of sysplex components
- z/OS Systems
- CF, CF links and structures
- Describe the steps used to initialized a system image into a sysplex during NIP
- Identify and explain key NIP messages that surface during sysplex initialization
- Describe why WTOR messages can be issued for normal and problem scenarios during sysplex initialization
- Properly remove a system from the sysplex
- Describe z/OS 1.10 and 1.11 changes that relate to how systems are removed from the sysplex
- Describe the purpose and use of sysplex couple data sets
- Identify and explain new information provided in the output of the D XCF, C command with z/OS 1.10, 1.11, and 1.12
- Describe CFRM policy requirements to define CFs and structures
- Use commands to manage couple data sets and identify support options
- Describe CFRM CDS format options to support and how they are used
- Describe the difference between a GRS ring and a GRS star complex
- Identify GRS star requirements and its structure attributes
- Describe how JES2 checkpoint uses the CF
- Use the JES2 reconfiguration dialog to move checkpoint from DASD to CF
- Manage Reset profile to update IOCDS pointer
- Activate CFRM policy, verify CF connectivity and resolve policy pending conditions
- List and describe recent OS enhancements addressing sympathy sickness
- Describe the purpose and use of SFM
- Activate an SFM policy, verify SFM policy settings and identify SFM action messages
- Describe the purpose and use of ARM
- Activate a default ARM policy and verify ARM status
- Describe Server Time Protocol (STP)
- Identify various STP terminology and supported configurations
- Identify DB2 overall configuration and structure recovery concepts
- Identify the steps necessary to remove or delete:
- DB2 cache structure for group buffer pools
- CICS temporary storage queue pool structures
- RACF database cache structures
- IMS OSAM and VSAM cache structures
- IRLM lock structure
- DB2 list (SCA) structure
- VSAM RLS lock and cache structures
- IMS shared-queue or EMH structures
- Global resource serialization lock structure

Prerequisites:

You should have:

- experience with the HMC and the Parallel Sysplex environment
- attended some previous sysplex class

Any one of the following Parallel Sysplex courses will provide the needed skill:

- IBM System z Parallel Sysplex Operation and Recovery (MV90DK) (H4057)
- Parallel Sysplex Planning and Implementation for z/OS (MV450) (H3995) (H3396)
- Parallel Sysplex Implementation Workshop (ES420) or
- IBM System z Parallel Sysplex Operations(ES73DK)

Testing and Certification

None

Follow-on-Courses:

None

Content:

Day 1

- Welcome
- Unit 1 - Parallel Sysplex overview
- Machine lab exercises

Day 2

- Unit 2 - Sysplex initialization, CDS usage, and recovery
- Machine lab exercises

Day 3

- Unit 3 - Managing CFs, structures, policies, and recovery
- Machine lab exercises

Day 4

- Unit 4 - Dynamic CF implementation, Sysplex Failure Manager, and Automatic Restart Manager
- Machine lab exercises

Day 5

- Machine lab exercises
- Unit 5 - STP, DB2 and structure recovery and removal overview

Further Information:

For More information, or to book your course, please call us on 00 966 92000 9278

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