

Verity Systems, Inc.

Using FDRABR® Effectively

Course Outline

The FDRABR storage management system provides all of the functions necessary to manage data throughout its life cycle in the modern data center. These functions include operations such as backup / recovery, migration / recall, dataset copying, movement, and deletion, volume reconstruction, disaster recovery operations, and more. While conceptually simple, the FDRABR system includes many JCL and control-statement driven features that allow the administrator, operator, or user to perform the complex tasks of DASD storage management.

Introducing FDRABR and Storage Management

Storage Management Functions Overview

- Storage Management Goals – Space and Data Availability
- Major Storage Management Functions - Backup, Recovery, and Moving/Copying Datasets and Volumes
- Archive and Automatic Recall
- Locating and Managing Backups, Reporting, and Disaster Recovery
- Using FDRABR
 - Batch-Driven JCL and How FDRABR differs from DFSMSHsm
 - ISPF interfaces to FDRABR functions

Programs of the FDRABR System

- Data Movers - FDR, FDRDSF, FDRCOPY, and FDRCPK
- Data Managers - FDRABR and related programs
- Backup Managers - FDRTCOPY/FDRTSEL
- Report Utilities – FDRABRP and FDREPORT
- Administrative Utilities – FDRABRM, FDRABRCM, FDRSTART, FDRARCH

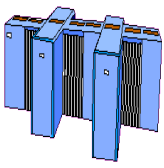
Moving and Copying Datasets with the FDR System

- Using FDRCOPY – JCL, control statements, and function
- Using FDRDSF – JCL, control statements, and function
- Operational Considerations – Enqueue, Backup media, volume selection, et. al.
- Considerations for VSAM, SMS, or special types of data

Full Volume and Incremental Backup with FDRABR

FDRABR Backup Architecture

- Generations, Cycles, and Autocycles,
- ABR Use of the Format-1 DSCB, Importance of the ABR Model DSCB
- Backup File Naming Conventions and Requirements, and POOLDISK and LASTAPE
- The FDRABR Catalog
 - Keeping track of backups with the FDRABR Backup Catalog
 - Restoring deleted datasets via the FDRABR Scratch Catalog



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Full Volume and Incremental Backup with FDRABR (continued)

Backing Up Data with FDRABR

- Daily and Weekly Backup JCL and Control Statements
- Insuring Successful Completion, Email and other options

Restoring Data with FDRABR

- Dataset Restore vs. Volume Restore, JCL and Control Statements
- Options for Cataloging, Allocation, Renaming, and SMS management
- JCL restore vs. restore with ISPF

Non-disruptive backup with FDRINSTANT

- Point-in-time hardware and software architecture
- Techniques and Operation of Instant-Backup

Disaster Recovery Considerations

- Full-Volume Reconstruction Procedures
- Tape Management Systems and FDR tapes
- Minimizing Tape Mounts and Tape Contention

Archive / Superscratch and Automatic Recall

FDRABR Archive Architecture

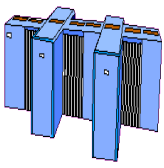
- Selecting Criteria for Archive
- Structure and Purpose of the FDRABR Archive Control File
- Maintaining the Archive Control File with FDRARCH

Archive and Superscratch Operation

- JCL and Control Statement Syntax for Archive and Recovery
- SMS management class / storage group criteria considerations
- Archive Expiration and Management
- Using FDRTSEL to Consolidate and Recycle Archive Backup Tapes

Recalling Archived Data

- Implementing Automatic Recall
- Explicit vs. Implicit Recall
- How the FDRABR Catalog Locate Exit Works



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FDRABR System Reporting and Instrumentation

Standard Reporting with FDRABRP

- Types of FDRABRP Reports – Backup, Catalog, Dataset, Scratch, and Archive

Customized Reporting with FDREPORT

- FDREPORT Architecture and Extended Selection Criteria
- FDREPORT selection fields from Volume, Dataset, Catalog, and Control Files
- Sorting, Summarizing, and Controlling the Format of Reports
- Using FDREPORT to create Control Statements for FDRABR and other Utilities
- Using the FDREPORT ISPF Dialog and FDRVIEW Graphical Interface

FDRABR System Security

- Dataset and Volume level security
- Dataset and backup encryption
- Security resources and authorities
- Critical security datasets and resources

FDRABR Options, Tuning, Security, and Other Considerations

- Default FDRABR Installation Options and the FDR Options Table (FDROPT)
- Establishing and Maintaining the Protect Lists and the Restore Allocation List
- Using FDRSTART and FDRSTATS to refresh FDROPT in Common Storage
- Installing and Testing New Releases of FDRABR