Using DFSORT and ICETOOL (4 Day)

Benefits

Students who complete this course will be able to code JCL and DFSORT and ICETOOL control statements to utilize the power of these utilities. This includes using these utilities instead of tedious programming languages to create reports (with up to three levels of control breaks), XML files, and HTML files from flat files, VSAM files, members of PDS or PDSE or files in the Hierarchical File System (HFS).

Audience

Experienced programmers and analysts who need a solid, in-depth exploration of DFSORT and ICETOOL capabilities.

Prerequisites

A working understanding of JCL

Major Topics Include

- DFSORT control statements: INCLUDE, OMIT, INREC, OUTREC, SORT, OUTFIL, OPTION, SUM, RECORD, MERGE, JOINKEYS, JOIN, REFORMAT
- ICETOOL operators: COPY, COUNT, DEFAULTS, MERGE, MODE, RANGE, RESIZE, SORT, STATS, UNIQUE, VERIFY, DISPLAY, OCCUR, SUBSET, SELECT, SPLICE
- Supported data types
- Symbolic names, user-defined and DFSORT-provided
- Using JCL symbolics in SORT and ICETOOL control statements
- Dates and times; relative dates; dates with two-digit years
- The Century Window
- The Hierarchical File System (HFS)
- DFSORT and HFS files
- Report terminology
- Markup languages
- Introduction to XML
- DFSORT and XML
- Introduction to HTML
- DFSORT and HTML
- Joining files
- Collation sequences and locales in DFSORT
- The ICEGENER utility

Exercises

There are 21 hands-on exercises

Using DFSORT and ICETOOL - Topical Outline

Day One

Introduction to DFSORT
  Background
  Computer Exercise: Setting up for the labs

The DFSORT Program
  DFSORT Capabilities
  JCL and Control Statements for DFSORT
  Introduction to INCLUDE / OMIT Statements
  Introduction to the INREC Statement
  Introduction to the SORT Statement
  Introduction to the OUTREC Statement
  Using SORT to do a copy

Data Types and Symbolic Names
  Data Types
    CH, AQ, ZD,
    ZDF, ZDC, PD,
    PDF, PDC, CSF,
    UFF, SFF, CSL,
    CST, CLO,
    CTO, FI, FL, BI,
    AC, ASL, AST
  Symbolic Names
  Literals
  Using Symbolic Names
  Converting values
  Additional symbolic name facilities
  Computer Exercise: Using Names

A Deeper Look at INCLUDE, OMIT, and SORT
statements
  INCLUDE / OMIT: Additional COND tests
  The Complete SORT Statement
  Computer Exercise: Using Additional Tests
  and SORT Operands

The INREC and OUTREC Statements, round 2
  The Roles of INREC and OUTREC
  The PARSE Operand
  PARSE and symbolic names
  Computer Exercise: PARSE

The INREC and OUTREC Statements, round 3
  The BUILD operand
  BUILD Values
  Computer Exercise: Using BUILD

The INREC and OUTREC Statements, round 4
  The OVERLAY operand
  The FINDREP operand
  Computer Exercise: OVERLAY and FINDREP

Day Two

he INREC and OUTREC Statements, round 5
  The IFTHEN operand
  Computer Exercise: IFTHEN

Working with Dates
  Dates
  Dates with four digit years
  Dates with two digit years
  Enhanced date processing
  Date Field Arithmetic
  Computer Exercise: Sort and Format Dates

Working with Times
  Times
OUTFIL - Multiple output files
  Some Perspective
  The OUTFIL statement
  Computer Exercise: Using OUTFIL

OUTFIL, round 2 - Reports
  Report terminology
  Report related operands of OUTFIL
  Headers, Trailers, Control Breaks
  Computer Exercise: Generating Reports

Day Three

OUTFIL, round 3 - Markup
    Markup Languages
    Introduction to XML
    DFSORT and XML
    HTML - An Introduction
    DFSORT and HTML
    Computer Exercise: Generating Markup

Working with HFS Files
    z/OS UNIX
    Introduction to the Hierarchical File System
    (HFS)
    HFS JCL Parameters
    JCL and HFS Files: DFSORT Usage
    Copying data to the HFS
    Computer Exercise: Using HFS Files with
    DFSORT

Alternative Orderings
    Collation sequence
    ALTSEQ - Specifying alternative collating
    sequences
    Locales - Ordering with an awareness of
    languages and formatting conventions
    Sorting ASCII files
    Computer Exercise Sort an ASCII File

Additional DFSORT Control Statements
    DFSORT Statements
    Exits
    The SUM Statement
    The RECORD Statement
    Merge Operations
    The MERGE Statement
    The OPTION Statement
    JCL Statements Revisited
    Computer Exercise: Using Additional DFSORT
    facilities

Joining files for a SORT or COPY operation
    JOIN concepts
    The JOINKEYS, JOIN, and REFORMAT
    statements
    JOINKEYS Applications notes
    Computer Exercise: A JOINKEYS Application

Day Four

Introduction to ICETOOL
    ICETOOL Overview
    ICETOOL COPY operator
    ICETOOL COUNT operator
    Numeric editing in ICETOOL
    ICETOOL DEFAULTS operator
    ICETOOL MERGE operator
    ICETOOL MODE operator
    ICETOOL RANGE operator
    ICETOOL SORT operator
    ICETOOL STATS operator
    ICETOOL UNIQUE operator
    ICETOOL VERIFY operator
    Computer Exercise: Introduction to ICETOOL

The ICETOOL DISPLAY operator
    The DISPLAY Operator
    DISPLAY examples
    Computer Exercise: DISPLAYing Data

The ICETOOL OCCUR operator
    The OCCUR Operator
    OCCUR examples
    Comparing ICETOOL Operators
    Computer Exercise: Analyzing Data Patterns

The ICETOOL RESIZE,DATASORT, SUBSET, and
SELECT operators
    The RESIZE operator
    The DATASORT operator
    The SELECT operator
    The SELECT operator
    Computer Exercise: Using SELECT

The ICETOOL SPLICE operator
    The SPLICE operator
    Computer Exercise: SPLICE-ing Files

Loose Ends