

# DFSMS Basics: How to Write ACS Routines Hands-on Lab Workbook

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IBM

Feb 6, 2013  
Session Number 12320



# Resources

- **Lab TSO USERIDs**
  - SHARA01 thru SHARA20 w/ password (firstpw)
- **Lab Data Sets**
  - SHARAx.x.S12320.ACS
  - SHARAx.x.S12320.SMS.SCDS
- **Publications**
  - DFSMS Storage Administration Reference (section hand-out)
  - DFSMS Implementing System-Managed Storage
  - DFSMS Using the Interactive Storage Management Facility

# Lab Basics

- **SHARAx.S12320.ACS**
  - Members for your lab use
    - DCLAB
    - SCLAB
    - MCLAB
    - SGLAB
  - Contains the ACS routines for a minimal configuration
    - SCMIN and SGMIN
  - Contains some example routines
    - DCEXAMPL, SCEXAMPL, MCEXAMPL and SGEXAMPL
  - Example solutions
    - DCANSWER, SCANSWER, MCANSWER and SGANSWER
  - ACS Routine stubs
    - STUB
- **SHARAx.S12320.SMS.SCDS**
  - SMS Configuration to code ACS against

# Lab Configuration

- **SHARAx.x.S12320.SMS.SCDS**
  - SCDS configuration to code ACS against
- **Available DATACLAS(s)**
  - Default, Extended, HFS, PDSE, VEAEXTND
- **Available STORCLAS(s)**
  - Default, Extended, GSPACE
- **Available MGMTCLAS(s)**
  - RLSEIMM
- **Available STORGRP(s)**
  - Default, Extended

# Lab Pre-stuff

- Set yourself up as a Storage Administrator
  - ISMF
  - 0 - Profile Options
  - 0 - User Mode Selections
  - 2 – Storage Administrator
  - End/Exit 3 times
  
- **NOTE: This is an exercise in syntax, not logic.**

# Lab 1

- **Create the 'stubs' for each Class and Group**
  - Put them in members DCLAB, SCLAB and MCLAB and SGLAB of data set SHARAx.x.S12320.ACS
    - The 'stubs' can be found in SHARAx.x.S12320.ACS(STUB)
  - Translate the ACS routines via ISMF 7 / 2 to your configuration (SCDS) data set (SHARAx.x.S12320.SMS.SCDS)

## Lab 2

- **Create Filter Lists**
  - Use the SC ACS routine created in Lab 1
  - Modify the routine such that it contains FILTLISTs
    - Create a filter of SYSTEM for HLQ of SYS1 and SYS2
    - Create a filter for SPF for 2<sup>nd</sup> level qualifier of SPF\*
- Translate the ACS routine

## Lab 3

- **If/Then Logic**
  - Use the SC ACS routine created in the previous lab
  - Modify the routine such that it contains IF/THEN logic
    - Compare the HLQ to the SYSTEM filter and set no (null/' ') SC
    - Compare the second-level qualifier to the SPF filter and set a Storage Class of Default
- Translate the ACS routine



## Lab 4

- **SELECT Logic**
  - Use the SC ACS routine created in the previous lab
  - Modify the routine such that it contains a SELECT statement
    - SELECT on Read/Write variable &DATACLAS
      - *2 methods to accomplish this*
      - *When incoming DC is VEAEXTND set the SC to EXTENDED*
  - Translate the ACS routine

## Lab 5

- **WRITE Statement**
  - Use the SC ACS routine created in the previous lab
  - Modify the routine such that it contains a WRITE statement(s) to indicate which storage class is assigned
    - Syntax: WRITE 'message'
    - Try to make sure every exit point has a write statement
- Translate the ACS routine

## Lab 6

- **Create another filter list for SPF in the SG Routine**
  - Based on the second-level qualifier starting with SPF
    - Set a Storage Group of Default
- **Translate the ACS routine**

## Lab 7

- **Create another filter list for SPF in the DC and MC Routines**
  - Based on the 2<sup>nd</sup> level qualifier starting with SPF:
    - Set Data Class of Default
    - Management Class of RLSEIMM.
- **Translate the ACS routines**

## Lab 8

- **Use SELECT Logic**
  - When the DSNTYPE is LIBRARY:
    - Set a Data Class of PDSE
    - Storage Class of Default, and
    - Storage Group of Default
  - When the DSNTYPE is PDS:
    - Set a Data Class of Default
    - Set a Storage Class of Default
    - Set a Storage Group of Default
- **Translate the ACS routines**

## Lab 9

- **Based on MAXSIZE of 100MB and DSORG of VS, set:**
  - Data Class of 'VEAEXTND',
  - Storage Class of 'Extended'
  - Storage Group of 'Extended'
- HINT: The SC aspect of this assignment is already complete.
- **Translate the ACS routines**

## Lab Assignment (cont)

- **Validate** the configuration with ISMF 7 / 3 to your configuration (SCDS) data set (SHARAx.x.S12320.SMS.SCDS)

# Summary

- **Upon completion of this session, you should...**
  - Have a better understanding of the ACS environment
  - Be able to write a basic ACS routine
  - Understand how to Translate and Validate an ACS routine
  - Understand how to determine what Translate and/or Validate errors occurred
  - Be familiar with much of the ACS syntax



## Advanced Lab 10

- Create a new DCA, SCA, MCA, SGA members in SHARAx.S12320.ACS and implement the following rules:
  - PDS and LIBRARY data set are assigned
    - DC: PDSE, SC: Default, MC: none, SG: Default
  - Data sets over 100MB are assigned:
    - DC: Extended, SC: Extended, MGMTCLAS: RLSIMM, SG: Extended
  - Data sets with HLQ of SYSTEM are assigned “ ” for all routines
  - Data sets with second qualifier as “GS” are assigned to
    - SC: GSPACE
- Translate your routines!

## For Additional Experimentation

- Create your own routines!
  - Available structures are on page 4 of the lab
- Create your own structures!
  - Just be sure to use SCDS of SHARAx.x.S12320.SMS.SCDS
- Try using the ACS Routine Tester
  - ISMF Option 7.4

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