
As Cool as ICE!

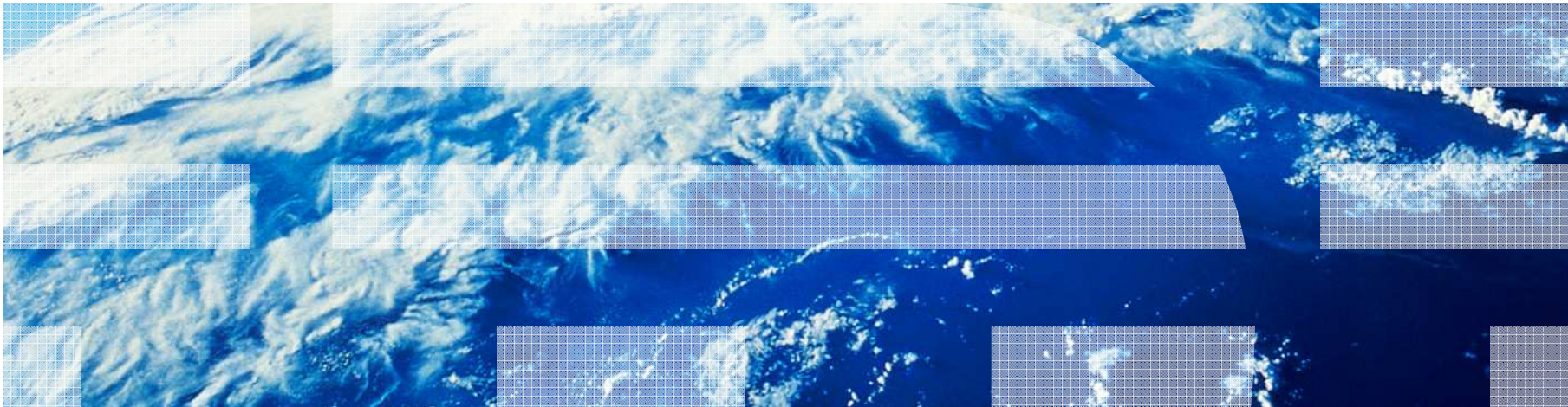
Lab Instructions

Mark Nelson

SHARE Session 8256

z/OS Security Server (RACF) Design and Development. IBM Poughkeepsie

markan@us.ibm.com



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Background

- **The “As Cool As ICE” lab demonstrates:**
 - How to unpack the RACFICE package
 - How to execute all of the RACF reports
 - How to write your own Report
- **Each of you has a user ID of the form SHARBnn**
 - “nn” is a number that I’ve assigned to your workstation
 - All user IDs have the same password (“firstpw”)
- **You will be using read-only SMF Unload and RACF Database Unload Utility output**
 - Note: NOT REAL WORLD!
- **This is a guided tour... please let your tour guide (me) know if you are having any problems.**

Step 1: LOGON

- You should be sitting at a IBM Personal Communications Manager (PCOMM) session that looks like this:

```
Enter Your Userid:
Password:
Application: tso
Application Required. No Installation Default
```

- When prompted, enter your user ID (SHARBnn)

Step 1: LOGON...

- Next, you'll see the traditional TSO/E logon panel. Enter your password.

```

----- TSO/E LOGON -----

Enter LOGON parameters below:                                RACF LOGON parameters:

Userid    ==> SHARB09                                        New Password ==>
Password  ==> firstpw                                       Group Ident  ==>
Procedure ==> SHARE
Acct Nbr  ==> SHR
Size      ==>
Perform   ==>
Command   ==> ISPF

Enter an 'S' before each option desired below:
      -Nomail          -Nonotice      S -Reconnect          -OIDcard

PF1/PF13 ==> Help      PF3/PF15 ==> Logoff    PA1 ==> Attention    PA2 ==> Reshow
You may request specific help information by entering a '?' in any entry field
  
```

Step 2: Getting into your Data Set

- Next, you'll see the ISPF LOGON Panel. Enter option 3.4

```

----- SHARE ISPF 6.1 SCROLLABLE PRIMARY OPTION MENU ----- S1
OPTION ==> 3.4

D Alternate Dialog ==> CMD(%????)
D2 Alternate Dialog ==> PANEL(????)

More:
The time is 5:53 p.m. on Friday, February 25, 2011 (2011.056)
Your uid is SHARB09 dsn prefix is SHARB09 proc is SHARE sys is S1

0 SETTINGS - Specify ISPF parameters
1 VIEW - View source data or output listing
1P VIEW-OE - View/Browse files in the Open Edition file system
2 EDIT - Create or change source data
2P EDIT-OE - Edit files in the Open Edition file system
3 UTILITIES - Perform utility functions
3P ISHELL-OE - Open Edition ISPF shell
4 FOREGROUND - Invoke language processors in foreground
5 BATCH - Submit job for language processing
6 COMMAND - Enter TSO command, CLIST, or REXX exec
7 DIALOG TEST - Perform dialog testing
8 LM UTILITIES - Perform library administrator utility functions
9 IBM PRODUCTS - Additional IBM program development products
F1=HELP F2=SPLIT F3=END F4=RETURN F5=RFIND F6=RCHANGE
F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIEVE
  
```

Step 2: Getting into your Data Sets...

- Enter “SHAREBnn.RACFICE” as the “Diname Level”, where nn=your user ID

```
Menu RefList RefMode Utilities Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
Data Set List Utility

Option ===>

blank Display data set list          P Print data set list          More:    +
      V Display VTOC information      PV Print VTOC information

Enter one or both of the parameters below:
Diname Level . . . SHARB09.RACFICE
Volume serial . .

Data set list options
Initial View          Enter "/" to select option
1  1. Volume          /  Confirm Data Set Delete
   2. Space           /  Confirm Member Delete
   3. Attrib          /  Include Additional Qualifiers
   4. Total           /  Display Catalog Name
                        /  Display Total Tracks
                        Prefix Diname Level

When the data set list is displayed, enter either:
F1=Help    F2=Split    F3=Exit    F7=Backward  F8=Forward  F9=Swap
F10=Actions F12=Cancel
```

Step 2: Getting into your Data Sets...

- You should see your data set for this project. Put a “e” in the comand field

```

Menu Options View Utilities Compilers Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
DSLIS - Data Sets Matching SHARB09.RACFICE                                     Row 1 of 1
Command ==>                                                                    Scroll ==> PAGE

Command - Enter "/" to select action          Message          Volume
-----
e          SHARB09.RACFICE.CNTL                                     SHTSO7
***** End of Data Set list *****

```

F1=Help F2=Split F3=Exit F5=Rfind F7=Up F8=Down F9=Swap
F10=Left F11=Right F12=Cancel

Step 2: Getting into your Data Sets...

- You have three members populated in the data set:
 - IEBUPDTE, which we will use to create the RACFICE reports in your data se
 - ICETOOL, a standalone sample ICETOOL job
 - JOBCARD, a sample JOBCARD for this system

- Put an “S” next to IEBUPDTE

```
Menu  Functions  Confirm  Utilities  Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL                               Row 00001 of 00003
Command ==>                Scroll ==> DATA

      Name      Prompt      Size  Created      Changed      ID
-----
_s_____ IEBUPDTE          6  2011/02/25  2011/02/25 13:40:39  MARKAN
_____  JOBCARD           3  2010/02/02  2011/02/25 13:28:37  MARKAN
**End**
```

```
F1=Help      F2=Split    F3=Exit     F5=Rfind    F7=Up       F8=Down     F9=Swap
F10=Left    F11=Right   F12=Cancel
```

Step 3: Creating your RACFICE Members

- Change the two occurrences of “SHARBNN” to your user ID

```

    File  Edit  Edit_Settings  Menu  Utilities  Compilers  Test  Help
    sssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
    EDIT      SHARB09.RACFICE.CNTL(IEBUPDTE) - 01.03                Columns 00001 00072
    Command ===>                                          Scroll ===> CSR
    *****  *****  *****  *****  *****  *****  *****  *****
    ==MSG> -CAUTION- Profile changed to CAPS ON (from CAPS OFF) because the
    ==MSG>          data does not contain any lower case characters.
    ==MSG> -Warning- The UNDO command is not available until you change
    ==MSG>          your edit profile using the command RECOVERY ON.
    000100 //SHARBNNI  JOB  , 'UNLOAD RACFICE RPTS', CLASS=A,
    000200 //          MSGLEVEL=(1,1), NOTIFY=&SYSUID, MSGCLASS=H
    000300 //UNLOAD   EXEC PGM=IEBUPDTE, PARM=NEW
    000400 //SYSPRINT DD   SYSOUT=*
    000500 //SYSUT2   DD   DSN=SHARBNN.ACFICE.CNTL, DISP=SHR
    000600 //SYSIN    DD   DSN=SYS1.SAMPLIB(IRRICE), DISP=SHR
    *****  *****  *****  *****  *****  *****  *****  *****
    *****  *****  *****  *****  *****  *****  *****  *****
  
```

Step 3: Creating your RACFICE Members...

- Use the SUB command to submit the job.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(IEBUPDTE) - 01.03          Columns 00001 00072
Command ==> SUB                                          Scroll ==> CSR
***** ***** Top of Data *****
==MSG> -CAUTION- Profile changed to CAPS ON (from CAPS OFF) because the
==MSG>          data does not contain any lower case characters.
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
000100 //SHARB09I JOB  , 'UNLOAD RACFICE RPTS',CLASS=A,
000200 //          MSGLEVEL=(1,1),NOTIFY=&SYSUID,MSGCLASS=H
000300 //UNLOAD EXEC PGM=IEBUPDTE,PARM=NEW
000400 //SYSPRINT DD  SYSOUT=*
000500 //SYSUT2 DD   DSN=SHARB09.RACFICE.CNTL,DISP=SHR
000600 //SYSIN DD   DSN=SYS1.SAMPLIB(IRRICE),DISP=SHR
***** ***** Bottom of Data *****

```

```

F1=Help      F2=Split      F3=Exit      F5=Rfind      F6=Rchange      F7=Up
F8=Down      F9=Swap       F10=Left     F11=Right     F12=Cancel

```

Step 3: Creating your RACFICE Members...

- **Wait for the job completion message. MAXCC=0 is what you want. If you get something else, we'll have to go into SDSF to figure out what happened.**

```
18.13.53 JOB16649 $HASP165 SHARB09I ENDED AT N1 MAXCC=0 CN(INTERNAL)
***
```

Step 3: Creating your RACFICE Members...

- Press “END” (PF3) twice to get back to this panel. Put an “e” in the command field.

```

Menu Options View Utilities Compilers Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
DSLIS - Data Sets Matching SHARB09.RACFICE                                     Row 1 of 1
Command ===>                                                                Scroll ===> PAGE

Command - Enter "/" to select action                                     Message                                     Volume
-----
e          SHARB09.RACFICE.CNTL                                           SHTSO7
***** End of Data Set list *****

```

F1=Help F2=Split F3=Exit F5=Rfind F7=Up F8=Down F9=Swap
F10=Left F11=Right F12=Cancel

Step 3: Creating your RACFICE Members...

- Whoa! Look at all the members! These were extracted from 'SYS1.SAMPLIB' by the IEBUPDTE job that you just submitted. This is the RACFICE report package.
- Select the **\$\$\$CNTL\$\$** member by putting an "s" in the command column

```

Menu  Functions  Confirm  Utilities  Help
#####
EDIT          SHARB09.RACFICE.CNTL          Row 00001 of 00091
Command ===>          Scroll ===> DATA
Name           Prompt           Size   Created           Changed           ID
_____  $$$COPYR
s_____  $$$CNTL$$
_____  $CFQG
_____  $CHLQ
_____  $ULAST90
_____  ACD$
_____  ACD$CNTL
_____  ALDS
_____  ALDSCNTL
_____  ASOC
_____  ASOCCNTL
_____  BGGR
_____  BGGRCNTL
_____  CADU
_____  CADUCNTL
_____  CCMD
_____  CCMDCNTL
F1=Help   F2=Split  F3=Exit   F5=Rfind   F7=Up     F8=Down   F9=Swap
F10=Left  F11=Right F12=Cancel

```

Step 4: Preparing your first RACFICE Job

- Delete the first two lines of the file by putting a “d” at the front of the line number. Put a “b” on the third line, and put COPY JOBCARD on the command line.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00          Columns 00001 00072
Command ==> COPY JOBCARD          Scroll ==> CSR
***** ***** Top of Data *****
==MSG> -CAUTION- Profile changed to CAPS OFF (from CAPS ON) because data
==MSG>          contains lower case characters.
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
==MSG> -CAUTION- Profile is set to STATS ON. Statistics did not exist for
==MSG>          this member, but will be generated if data is saved.
d36800 //USER01I JOB MSGLEVEL=(0,0),CLASS=5,NOTIFY=&SYSUID,MSGCLASS=H
d36900 /*JOBPARM S=ANY,LINES=99
b37000 /*-----
137100 /*
137200 /* RACFICE - Create reports from RACF database unload utility
137300 /*          (IRRDBU00) and RACF SMF unload utility (IRRADU00)
137400 /*
137500 /*
137600 /* RACF Database Reports
137700 /*
137800 /* Name Description

```

Step 4: Preparing your first RACFICE Job...

- The old job card will be delete and one for this system inserted. Change the SHARBNN to your user ID

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00           Member JOBCARD copied
Command ===>                                       Scroll ===> CSR
***** ***** Top of Data *****
==MSG> -CAUTION- Profile changed to CAPS OFF (from CAPS ON) because data
==MSG>          contains lower case characters.
==MSG> -Warning- The UNDO command is not available until you change
==MSG>          your edit profile using the command RECOVERY ON.
==MSG> -CAUTION- Profile is set to STATS ON. Statistics did not exist for
==MSG>          this member, but will be generated if data is saved.
000100 //SHARB09J  JOB CLASS=A,MSGLEVEL=(1,1),MSGCLASS=H,NOTIFY=&SYSUID,
000200 //          REGION=0M
000300 //*-----
137000 //*-----
137100 //*
137200 //* RACFICE - Create reports from RACF database unload utility
137300 //*          (IRRDBU00) and RACF SMF unload utility (IRRADU00)
137400 //*
137500 //*
137600 //* RACF Database Reports
137700 //*
F1=Help      F2=Split      F3=Exit      F5=Rfind     F6=Rchange   F7=Up
F8=Down      F9=Swap        F10=Left    F11=Right    F12=Cancel
  
```


Step 4: Preparing your first RACFICE Job...

- Press “scroll down” (PF8) approximately four (4) times until you see the data below.

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00          Columns 00001 0007
Command ==>                                         Scroll ==> CSR
143200 /*      VIOL      Access violations
143300 /*      WARN      Accesses allowed due to WARNING mode profiles
143400 /*-----
143500 //          JCLLIB ORDER=USER01.RACFICE.CNTL
143600 //          SET  ADUDATA=USER01.RACFICE.IRRADU00          IRRADU00 dat
143700 //          SET  DBUDATA=USER01.RACFICE.IRRDBU00          IRRDBU00 dat
143800 //          SET  ICECNTL=USER01.RACFICE.CNTL              ICETOOL  dat
143900 /*-----
144000 /*----- IRRDBU00-Based Reports -----
144100 /*-----
144200 //ALDS      EXEC RACFICE,REPORT=ALDS
144300 //ASOC      EXEC RACFICE,REPORT=ASOC
144400 //BGGR      EXEC RACFICE,REPORT=BGGR
144500 //CCON      EXEC RACFICE,REPORT=CCON
144600 //CGEN      EXEC RACFICE,REPORT=CGEN
144700 //CPRO      EXEC RACFICE,REPORT=CPRO
144800 //CONN      EXEC RACFICE,REPORT=CONN
144900 //GRPM      EXEC RACFICE,REPORT=GRPM
F1=Help      F2=Split      F3=Exit      F5=Rfind      F6=Rchange      F7=Up
F8=Down      F9=Swap      F10=Left     F11=Right     F12=Cancel

```

Step 4: Preparing your first RACFICE Job...

- **Change**
 - the JCLLIB statement to 'SHARBnn.RACFICE.CNTL', where nn=you
 - ADUDATA to MARKAN.SAMPLE.IRRADU00
 - DBYDATA to MARKAN.SAMPLE.IRRDBU00
 - ICECNTL to SHARBnn.RACFICE.CNTL, where nn = you
- **Type SUB on the command line to submit the job**
- **Wait for the job completion message. MAXCC=0 is what we want. If you don't get it, we'll need to go into SDSF to figure out what happened.**

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT      SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00          Columns 00001 00072
Command ==>  sub                                       Scroll ==> CSR
143200 //*      VIOL      Access violations
143300 //*      WARN      Accesses allowed due to WARNING mode profiles
143400 //*-----
143500 //          JCLLIB ORDER=SHARB09.RACFICE.CNTL
143600 //          SET   ADUDATA=MARKAN.SAMPLE.IRRADU00          IRRADU00 data
143700 //          SET   DBUDATA=MARKAN.SAMPLE.IRRDBU00          IRRDBU00 data
143800 //          SET   ICECNTL=SHARB09.RACFICE.CNTL          ICETOOL  data
143900 //*-----
144000 //*----- IRRDBU00-Based Reports -----
144100 //*-----
144200 //ALDS      EXEC RACFICE,REPORT=ALDS
144300 //ASOC      EXEC RACFICE,REPORT=ASOC
144400 //BGGR      EXEC RACFICE,REPORT=BGGR
144500 //CCON      EXEC RACFICE,REPORT=CCON
144600 //CGEN      EXEC RACFICE,REPORT=CGEN
144700 //CPRO      EXEC RACFICE,REPORT=CPRO
144800 //CONN      EXEC RACFICE,REPORT=CONN
144900 //GRPM      EXEC RACFICE,REPORT=GRPM
```

Step 5: Looking at the RACFICE Output

- Press PF2 to start a second ISPF session and enter S.H on the command line to start SDSF to look at the output

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00          Columns 00001 00072
. . . . .
----- SHARE ISPF 6.1 SCROLLABLE PRIMARY OPTION MENU ----- S1
OPTION  ==> s.h

D Alternate Dialog ==> CMD(%????)
D2 Alternate Dialog ==> PANEL(????)

                                          More:      +
The time is 6:39 p.m. on Friday, February 25, 2011 (2011.056)
Your uid is SHARB09  dsn prefix is SHARB09  proc is SHARE    sys is S1

0  SETTINGS      - Specify ISPF parameters
1  VIEW          - View source data or output listing
1P VIEW-OE       - View/Browse files in the Open Edition file system
2  EDIT          - Create or change source data
2P EDIT-OE       - Edit files in the Open Edition file system
3  UTILITIES     - Perform utility functions
3P ISHELL-OE     - Open Edition ISPF shell
4  FOREGROUND    - Invoke language processors in foreground
5  BATCH         - Submit job for language processing
F1=HELP      F2=SPLIT    F3=END      F4=RETURN   F5=RFIND    F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP     F10=LEFT   F11=RIGHT   F12=RETRIEVE

```

Step 5: Looking at the RACFICE Output...

- You will see a couple of jobs. The last one (SHARBnnJ) is the one that you just submitted. Put an s in the NP and press enter to review your job

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL($$CNTL$$) - 01.00          Columns 00001 00072
. . . . .
  Display Filter View Print Options Search Help
-----
SDSF HELD OUTPUT DISPLAY ALL CLASSES LINES 6,501          LINE 1-2 (2)
COMMAND INPUT ==>          SCROLL ==> CSR
NP  JOBNAME JobID  Owner  Prty C ODisp Dest          Tot-Rec Tot-
   SHARB09I JOB16649 SHARB09  144 H HOLD LOCAL          1,753
s  SHARB09J JOB16654 SHARB09  128 H HOLD LOCAL          4,748

```

F1=HELP F2=SPLIT F3=END F4=RETURN F5=IFIND F6=BOOK
F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIEVE

Step 5: Looking at the RACFICE Output...

- **Scroll up and down and look at some of the reports that have been created. Note that many will be empty as there isn't data relevant to all of the reports.**
- **Next, we'll run a short report that you will tailor. To do that, swap back to your member edit screen (PF9) and END out of that member with PF3**

Step 6: Running your own ICETOOL Report

- Select the member ICETOOL by typing “s icetool” on the command line

```

Menu Functions Confirm Utilities Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL          Member $$$CNTL$$ saved
Command ==> s ICETOOL                      Scroll ==> DATA
Name          Prompt           Size   Created      Changed      ID
-----
$$$CNTL$$ *Edited           118   2011/02/25   2011/02/25 18:48:26   SHARB09
$$$CFQG
$$$CHLQ
$$$ULAST90
ACD$
ACD$CNTL
ALDS
ALDSCNTL
ASOC
ASOCCNTL
BGGR
BGGRCNTL
F1=Help      F2=Split    F3=Exit     F5=Rfind    F7=Up       F8=Down     F9=Swap
F10=Left     F11=Right   F12=Cancel
. . . . .
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SHARB09J JOB16654 DSID      2 LINE 0          COLUMNS 02- 81
COMMAND INPUT ==>                               SCROLL ==> CSR
    
```

Step 6: Running your own ICETOOL Report...

- Change the jobname to SHARBnnl where “nn” is you
- This report shows all of the users whose user ID starts with ‘TEST’. How?

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(ICETOOL) - 01.01          Columns 00001 00072
Command ==>                               Scroll ==> CSR
***** ***** Top of Data *****
==MSG> -CAUTION- Profile changed to CAPS OFF (from CAPS ON) because data
==MSG>             contains lower case characters.
==MSG> -Warning- The UNDO command is not available until you change
==MSG>             your edit profile using the command RECOVERY ON.
000010 //SHARBNNI  JOB CLASS=A,MSGLEVEL=(1,1),MSGCLASS=H,NOTIFY=&SYSUID,
000020 //          REGION=0M
000030 //* -----
000040 //RACFICE   EXEC PGM=ICETOOL,PARM='MSGPRT=ALL'
000050 //TOOLMSG    DD SYSOUT=*
000060 //PRINT      DD SYSOUT=*
000070 //DFSMSG     DD SYSOUT=*
000080 //DBUDATA     DD DISP=SHR,DSN=MARKAN.SAMPLE.IRRDBU00
```

Step 6: Running your own ICETOOL Report...

- Scroll down to the TITLE line and change the title to something else. Don't go too long, though.....
- The INCLUDE statement selects the records that are in the report. We're only looking for TEST user IDs in this example
- Submit the job by typing "sub" on the command line
- Swap your session (PF9), which takes you back into SDSF, and select your job

```

File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(ICETOOL) - 01.02          Columns 00001 00072
Command ==>                                         Scroll ==> CSR
000500          PAGE                                     -
000600          TITLE('My report title')              -
000700          DATE(YMD/)                             -
000800          TIME(12:)                              -
000900          BLANK                                  -
001000          ON(10,8,CH)      HEADER('User ID')
001100 /*
001200 //TSTUCNTL DD *
001300 SORT      FIELDS=COPY
001400 INCLUDE  COND=(5,4,CH,EQ,C'0200',AND,10,4,CH,EQ,C'TEST')
001500 /*

```


Step 6: Running your own ICETOOL Report...

- And here it is!
- Once your done looking at it, PF9 (SWAP) to get to the report JCL

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(ICETOOL) - 01.02          Columns 00001 00072
Command ==>                                         Scroll ==> CSR
. . . . .
  Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SHARB09I JOB16655  DSID   104 LINE 1          COLUMNS 02- 81
COMMAND INPUT ==>                                         SCROLL ==> CSR
- 1 -          My report title          11/02/25          06:54:10 pm

User ID
-----
TESTUSER
TEST0001
TEST0002
TEST0003
TEST0004
TEST0005
TEST0006
TEST0007
```

Step 7: Adding Fields to your own ICETOOL Report

- **Let's add a few fields to your report. Using the information from the USER BASIC DATA record in RACF Macros and Interfaces. Pick a few fields and add them to the report as ON(fieldname) statements. A copy of things to remember**
 - Always add 4 to the starting position document in Macros and Interfaces to account for the record descriptor word
 - Remember to add the DFSORT character ("-") to each record (except the last)
- **Type 'sub' on the command like to submit the job.**

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(ICETOOL) - 01.02          Columns 00001 00072
Command ==>>>                               Scroll ==>>> CSR
000200 //TOOLIN      DD *
000300 SORT          FROM(DBUDATA) TO(TEMP01) USING(TSTU)
000400 DISPLAY      FROM(TEMP01) LIST(PRINT)  -
000500 PAGE
000600 TITLE('My Report Title') -
000700 DATE(YMD/) -
000800 TIME(12:) -
000900 BLANK -
001000 ON(10,8,CH)      HEADER('User ID') -
001010 ON(44,4,CH)      HEADER('Special') -
001011 ON(49,4,CH)      HEADER('Operations') -
001012 ON(390,4,CH)  HEADER('Auditor') -
001020 ON(10,8,CH)      HEADER('Last Job Date')
001100 /*
F1=Help      F2=Split      F3=Exit      F5=Rfind      F6=Rchange      F7=Up
F8=Down      F9=Swap      F10=Left     F11=Right     F12=Cancel
. . . . .
Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SHARB09I JOB16656 DSID 103 LINE 20 COLUMNS 02- 81
```

Step 7: Adding Fields to your own ICETOOL Report...

- PF9 to swap back to SDSF to look at your report

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
EDIT          SHARB09.RACFICE.CNTL(ICETOOL) - 01.02          Columns 00001 00072
. . . . .
  Display Filter View Print Options Search Help
-----
SDSF OUTPUT DISPLAY SHARB09I JOB16678  DSID   104 LINE 0          COLUMNS 02- 81
COMMAND INPUT ==>                                  SCROLL ==> CSR
***** TOP OF DATA *****
- 1 -             My Report Title             11/02/26             12:11:18 am

User ID      Special      Operations      Auditor      Last Job Date
-----
TESTUSER    NO             NO             NO           TESTUSER
TEST0001    NO             NO             NO           TEST0001
TEST0002    NO             NO             NO           TEST0002
TEST0003    NO             NO             NO           TEST0003
TEST0004    NO             NO             NO           TEST0004
TEST0005    NO             NO             NO           TEST0005
TEST0006    NO             NO             NO           TEST0006
TEST0007    NO             NO             NO           TEST0007
TEST0008    NO             NO             NO           TEST0008

  F1=HELP      F2=SPLIT      F3=END        F4=RETURN      F5=IFIND      F6=BOOK
  F7=UP        F8=DOWN      F9=SWAP      F10=LEFT      F11=RIGHT     F12=RETRIEVE
```

Summary

- **We've just scratched the surface... there are so many reports that you can create....**
- **Look at the 'SYS1.SAMPLIB(IRRICE)' reports... there are a lot of interesting techniques used there**
- **Look at the RACF Downloads section of the RACF web page**
– www.ibm.com/racf resources->downloads
- **The “Introduction to DFSORT” manual is *outstanding* and**
- **...and if you have any questions, please e-mail me!**