



# z/OS Introduction and Workshop

## Security Server (RACF)

## Unit Objectives

After completing this unit, you should be able to:

- Describe RACF authentication process
- Describe SAF base 'element'
- List RACF commands
- List RACF options
- Understand significance of Protect All switch
- Run RACF administrator and auditor reports
- Reset passwords



## RACF – Resource Access Control Facility

RACF (part of Security Server) and the other available packages are add-on products which provide the basic security framework on a z/OS mainframe

Identify and authenticate users

Authorize users to access protected resources

Log and report attempted unauthorized access

Control means of access to resources

## RACF functions overview



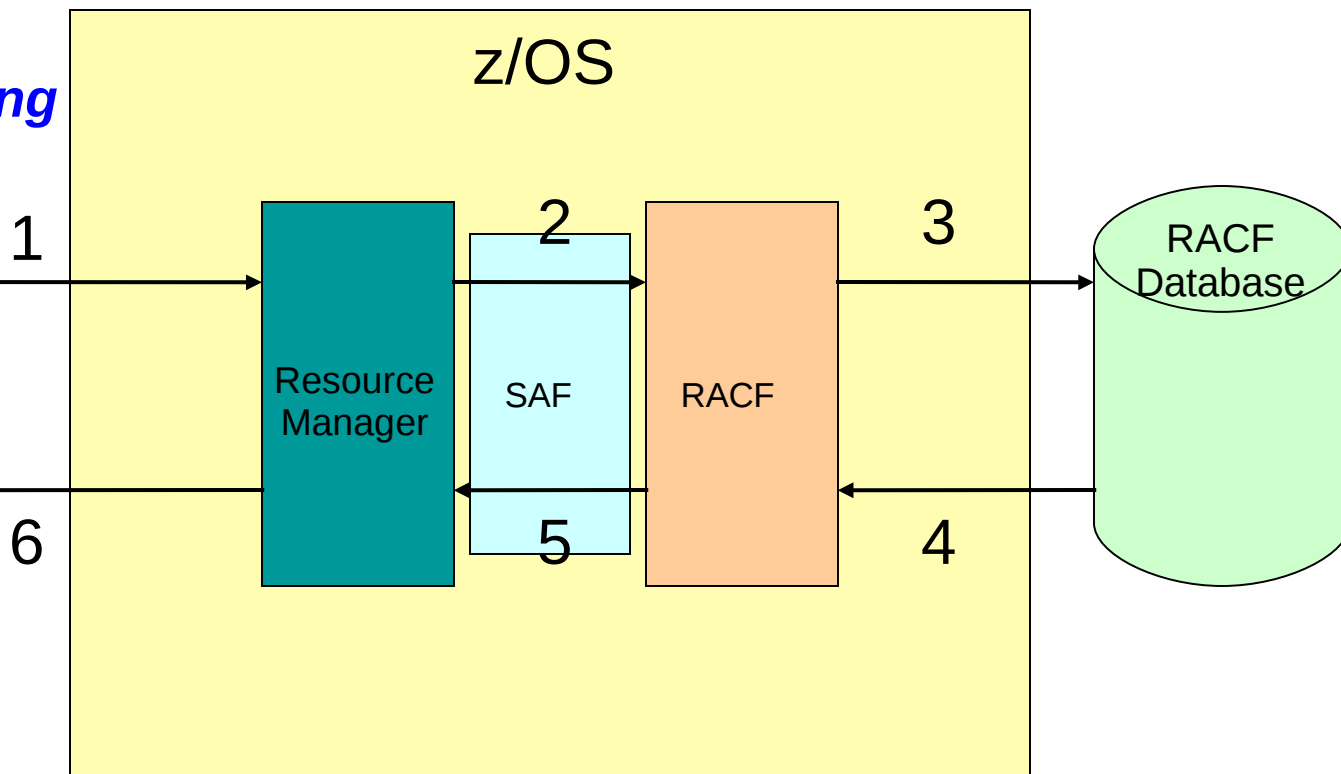
# RACF Security Processing



*permission  
requested*

*Security  
Authorization  
Facility*

*database  
inquiry*



*permitted/denied*

*recommendation*

*result of  
inquiry*



## RACF - System Authorization Facility (SAF)

SAF is part of z/OS

Uses RACF if it is present

Can also use an optional exit routine

SAF is a system service and is a common focal point for all products providing resource control.

SAF is invoked at control points within the code of the resource manager

## RACF – Administration

ISPF RACF Panels

RACF Native Commands

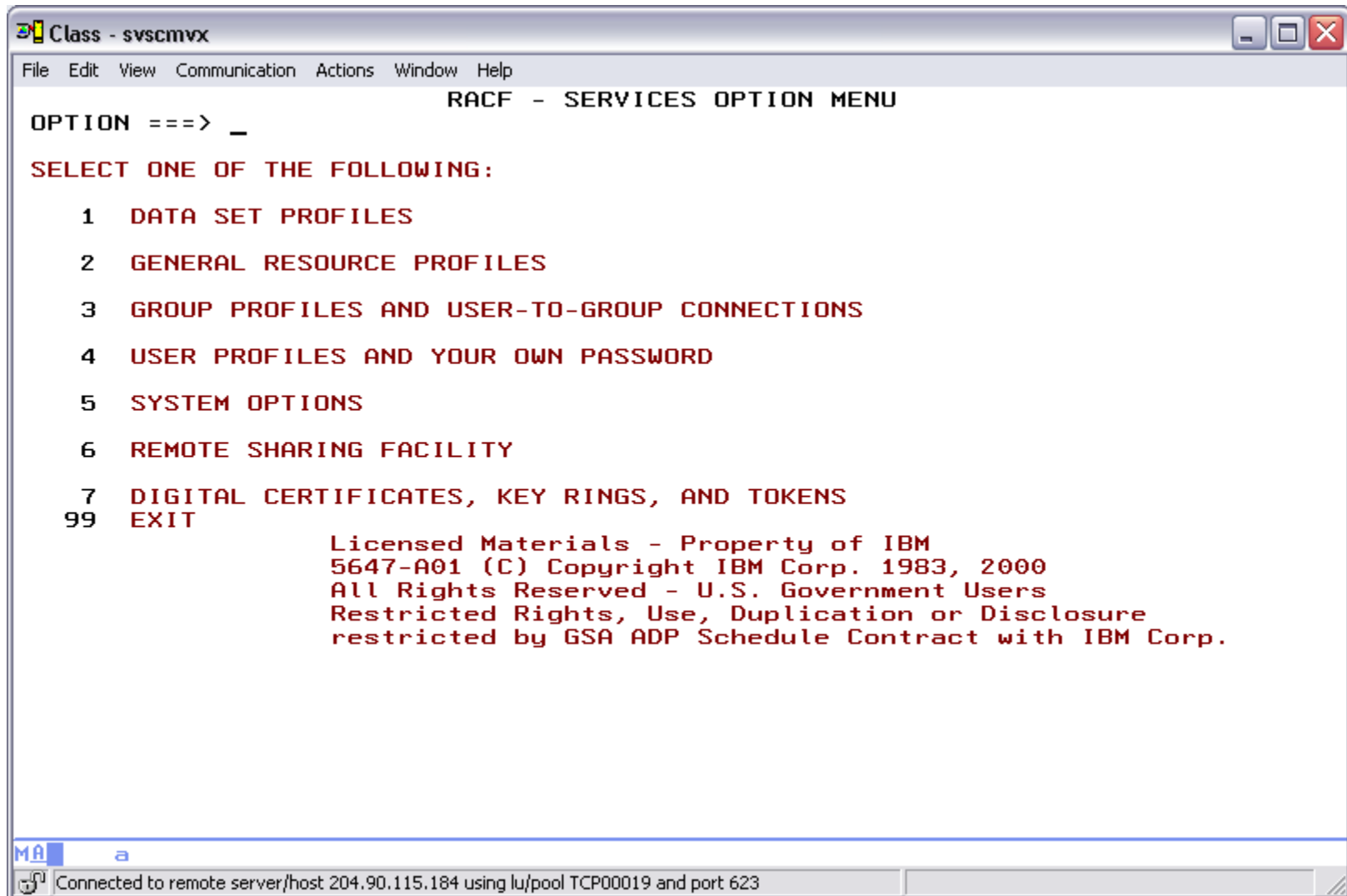
TSO

Batch

Console (selected commands only)

RACF Utilities

## RACF – Administration (Panels)



The screenshot shows a terminal window titled "Class - svscmvx" with a menu for RACF - SERVICES. The menu lists options 1 through 7, plus an exit option (99). The text is displayed in a monospaced font, with the menu title in bold. At the bottom, there is a status bar indicating the user is connected to a remote server.

```
Class - svscmvx
File Edit View Communication Actions Window Help

RACF - SERVICES OPTION MENU

OPTION ==> _

SELECT ONE OF THE FOLLOWING:

  1  DATA SET PROFILES
  2  GENERAL RESOURCE PROFILES
  3  GROUP PROFILES AND USER-TO-GROUP CONNECTIONS
  4  USER PROFILES AND YOUR OWN PASSWORD
  5  SYSTEM OPTIONS
  6  REMOTE SHARING FACILITY
  7  DIGITAL CERTIFICATES, KEY RINGS, AND TOKENS
99  EXIT

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```



## RACF – Commands...Page 1 of 2

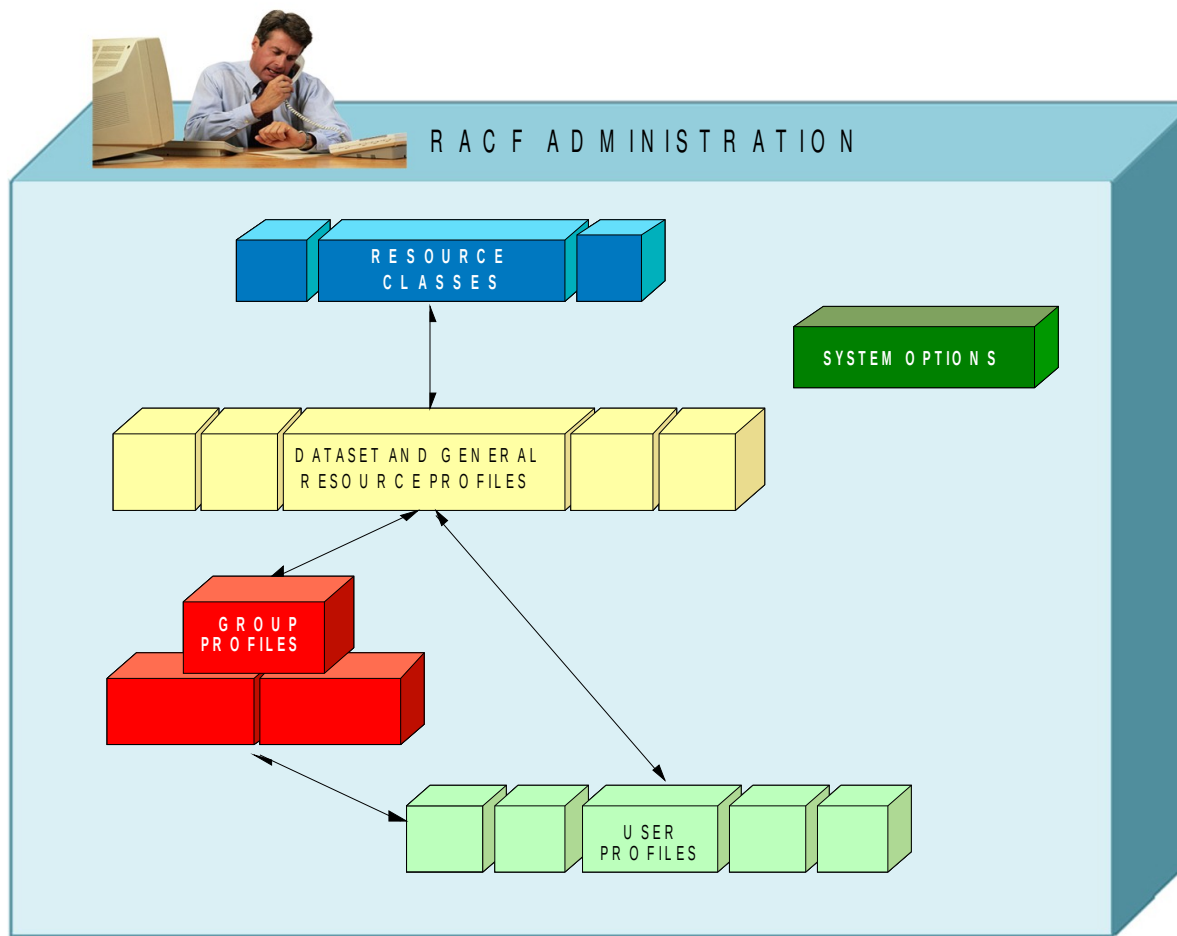
ADDGROUP	(AG)	Add Group Profile
ADDSD	(AD)	Add Data Set Profile
ADDUSER	(AU)	Add User Profile
ALTDSD	(ALD)	Alter Data Set Profile
ALTGROUP	(ALG)	Alter Group Profile
ALTUSER	(ALU)	Alter User Profile
CONNECT	(CO)	Connect User to Group
DELDSD	(DD)	Delete Data Set Profile
DELGROUP	(DG)	Delete Group Profile
DELUSER	(DU)	Delete User Profile
HELP		Obtain RACF Help...TSO HELP racf cmd
LISTDSD	(LD)	List Data Set Profile
LISTGRP	(LG)	List Group Profile
LISTUSER	(LU)	List User Profile
PASSWORD	(PW)	Specify User Password
PERMIT	(PE)	Maintain Resource Access Lists



## RACF – Commands...Page 2 of 2

RACDCERT	RACF Digital Certificate
RACLINK	Administer User ID Associations
RACPRIV	Set Write-Down Privileges
RALTER	(RALT) Alter General Resource Profile
RDEFINE	(RDEF) Define General Resource Profile
RDELETE	(RDEL) Delete General Resource Profile
REMOVE	(RE) Remove User from Group
RESTART	Restart RRSF Functions
RLIST	(RL) List General Resource Profile
RVARY	Change Status of RACF Database
SEARCH	(SR) Search RACF Database
SETROPTS	(SETR) Set RACF Options
SIGNOFF	Sign Off Sessions
STOP	Shutdown RRSF
TARGET	Define RRSF Nodes

# RACF - Structure Overview



# RACF – System Options

```

Class - svscmvx
File Edit View Communication Actions Window Help
READY
setropts list
ATTRIBUTES = INITSTATS WHEN(PROGRAM -- BASIC) SAUDIT CMDVIOL NOOPERAUDIT
STATISTICS = DATASET DASDVOL GDASDVOL GTERMINL OPERCMDS TAPEVOL TERMINAL
AUDIT CLASSES = NONE
ACTIVE CLASSES = DATASET USER GROUP ACCTNUM AIMS APPL CBIND CIMS CONSOLE
                  DASDVOL DIMS DSNR EJBROLE FACILITY FIELD GDASDVOL GEJBROLE
                  GIMS GXFACILI IIMS JIMS LIMS MIMS OPERCMDS PERFGPR PTKTDATA
                  PTKTVAL SERVER STARTED TIMS TSOAUTH TSOPROC UNIXPRIV
                  XFACILIT
GENERIC PROFILE CLASSES = DATASET ACCTNUM ACICSPCT AIMS ALCSAUTH APPCLU
                           APPCPORT APPCSERV APPCSI APPCTP APPL CACHECLS
                           CBIND CCICSCMD CIMS CONSOLE CPSMOBJ CPSMXMP
                           CRYPTOZ CSFKEYS CSFSERV DASDVOL DBNFORM DCEUUIDS
                           DCICSDCT DEVICES DIGTCERT DIGTCRIT DIGTMAP
                           DIGTRING DIRACC DIRAUTH DIRECTORY DIRSRCH DLFCLASS
                           DSNADM DSNR EJBROLE FACILITY FCICSFCT FIELD
                           FILE FIMS FSOBJ FSSEC GMBR IBMOPC IIMS ILMADMIN
                           INFOMAN IPCOBJ JAVA JCICSJCT JESINPUT JESJOBS
                           JESSPOOL KEYSMSTR LDAPBIND LFSCCLASS LIMS LOGSTRM
                           MCICSPPT MDSNBP MDSNCL MDSNDB MDSNJR MDSNPK
                           MDSNPN MDSNSC MDSNSG MDSNSM MDSNSP MDSNSQ MDSNTB
                           MDSNTS MDSNUF MDSNUT MGMTCLAS MQADMIN MQCHAN
                           MQCMDS MQCONN MQNLIST MQPROC MQQUEUE MXADMIN
                           MXNLIST MXPROC MXQUEUE MXTOPIC NDSLINK NETCMDS
                           NETSPAN NODES NODMBR NOTELINK NVASAPDT OIMS
                           OPERCMDS PCICSPSB PERFGPR PIMS PMBR PRINTSRV
                           PROCACT PROCESS PROPCNTL PSFMPL PTKTDATA PTKTVAL
                           RACFEVNT RACFVARS RACGLIST RACHCMBR RAUDITX
                           RCICSRES RDATA LIB RIMS RMTOPS RODMMGR ROLE
                           RRSFDATA RVARSMBR SCDMBR SCICSTST SDSF SERVAUTH
***
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```

## RACF – System Options

```

Class - svscmvx
File Edit View Communication Actions Window Help

SERVER SFSCMD SIMS SMESSAGE SOMDOBJ S STARTED
STORCLAS SUBSYSNM SURROGAT SYSMVIEW TAPEVOL
TCICSTRN TEMPDSN TERMINAL TIMS TMEADMIN TSOAUTH
TSOPROC UNIXMAP UNIXPRIV VMBATCH VMBR VMCMD
VMLAN VMMAC VMMDISK VMNODE VMPOSIX VMRDR VMSEGMT
VTAMAPPL VXMBR WRITER XCSFKEY XFACILIT

GENERIC COMMAND CLASSES = DATASET ACCTNUM ACICSPCT AIMS ALCSAUTH APPCLU
APPCPORT APPCSERV APPCSI APPCTP APPL CACHECLS
CBIND CCICSCMD CIMS CONSOLE CPSMOBJ CPSMXMP
CRYPTOZ CSFKEYS CSFSERV DASDVOL DBNFORM DCEUIDS
DCICSDCT DEVICES DIGTCERT DIGTCRIT DIGTNMAP
DIGTRING DIRACC DIRAUTH DIRECTRY DIRSRCH DLFCCLASS
DSNADM DSNR EJBROLE FACILITY FCICSFCT FIELD
FILE FIMS FSOBJ FSSEC GMBR IBMOPC IIMS ILMADMIN
INFOMAN IPCOBJ JAVA JCICSJCT JESINPUT JESJOBS
JESSPOOL KEYSMSTR LDAPBIND LFSCCLASS LIMS LOGSTRM
MCICSPPT MDSNBP MDSNCL MDSNDB MDSNJR MDSNPK
MDSNPN MDSNSC MDSNSG MDSNSM MDSNSP MDSNSQ MDSNTB
MDSNTS MDSNUF MDSNUT MGMTCLAS MQADMIN MQCHAN
MQCMDS MQCONN MQNLIST MQPROC MQQUEUE MXADMIN
MXNLIST MXPROC MXQUEUE MXTOPIC NDSLINK NETCMDS
NETSPAN NODES NODMBR NOTELINK NVASAPDT OIMS
OPERCMD S PCICSPSB PERFGRP PIMS PMBR PRINTSRV
PROCAT PROCESS PROPCNTL PSFMPL PTKTVAL
RACFEVNT RACFVARS RACGLIST RACHCMBR RAUDITX
RCICSRES RDATA LIB RIMS RMTOPS RODMMGR ROLE
RRSFDATA RVARSMBR SCDMBR SCICSTST SDSF SERVAUTH
SERVER SFSCMD SIMS SMESSAGE SOMDOBJ S STARTED
STORCLAS SUBSYSNM SURROGAT SYSMVIEW TAPEVOL
TCICSTRN TEMPDSN TERMINAL TIMS TMEADMIN TSOAUTH
TSOPROC UNIXMAP UNIXPRIV VMBATCH VMBR VMCMD

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```

## RACF – System Options

```

Class - svscmvx
File Edit View Communication Actions Window Help

VMLAN VMMAC VMMDISK VMNODE VMPOSIX VMRDR VMSEGMT
VTAMAPPL VXMBR WRITER XCSFKEY XFACILIT

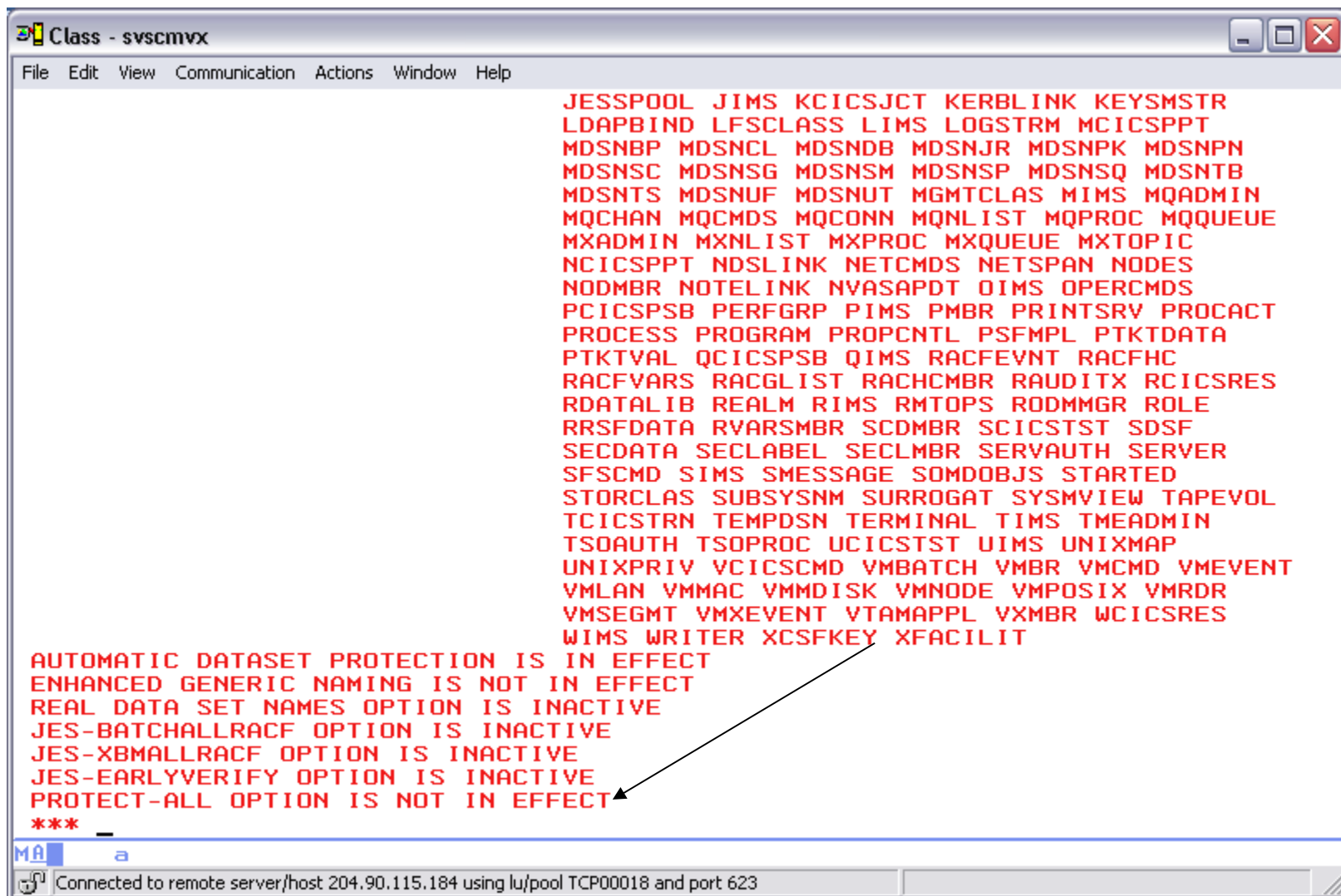
GENLIST CLASSES = NONE
GLOBAL CHECKING CLASSES = NONE
SETR RACLIST CLASSES = ACCTNUM APPL CBIND CONSOLE DSNR FACILITY FIELD
                        OPERCMDS PERFGPR PTKTDATA PTKTVAL SERVER STARTED
                        TSOAUTH TSOPROC UNIXPRIV XFACILIT

GLOBAL=YES RACLIST ONLY = NONE
LOGOPTIONS "ALWAYS" CLASSES = NONE
LOGOPTIONS "NEVER" CLASSES = NONE
LOGOPTIONS "SUCCESSES" CLASSES = NONE
LOGOPTIONS "FAILURES" CLASSES = NONE
LOGOPTIONS "DEFAULT" CLASSES = DATASET ACCTNUM ACICSPT AIMS ALCSAUTH
                                APPCLU APPCPORT APPCSERV APPCSI APPCTP
                                APPL BCICSPT CACHECLS CBIND CCICSCMD
                                CDT CFIELD CIMS CONSOLE CPSMOBJ CPSMXMP
                                CRYPTOZ CSFKEYS CSFSERV DASDVOL DBNFORM
                                DCEUIDS DCICSDCT DEVICES DIGTCERT DIGTCRIT
                                DIGTNMAP DIGTRING DIMS DIRACC DIRAUTH
                                DIRECTRY DIRSRCH DLFCLASS DSNADM DSNR
                                ECICSDCT EJBROLE FACILITY FCICSFCT FIELD
                                FILE FIMS FSOBJ FSSEC GCICSTRN GCPSMOBJ
                                GCSFKEYS GDASDVOL GDSNBP GDSNCL GDSNDB
                                GDSNJR GDSNPK GDSNPN GDSNSC GDSNSG GDSNSM
                                GDSNSP GDSNSQ GDSNTB GDSNTS GDSNUF GDSNUT
                                GEJBROLE GIMS GINFOMAN GLOBAL GMBR GMQADMIN
                                GMQCHAN GMQNLIST GMQPROC GMQQUEUE GMXADMIN
                                GMXNLST GMXPROC GMXQUEUE GMXTOPIC GDSF
                                GSOMDOBJ GTERMINL GXCSFKEY GXFACILI HCICSFCT
                                HIMS IBMOPC IDIDMAP IIMS ILMADMIN INFOMAN
                                IPCOBJ JAVA JCICSJCT JESINPUT JESJOBS

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```

## RACF – System Options



```

Class - svscmvx
File Edit View Communication Actions Window Help

JESSPOOL JIMS KCICSJCT KERBLINK KEYSMSTR
LDAPBIND LFSCCLASS LIMS LOGSTRM MCICSPPT
MDSNBP MDSNCL MDSNDB MDSNJR MDSNPK MDSNPN
MDSNSC MDSNSG MDSNSM MDSNSP MDSNSQ MDSNTB
MDSNTS MDSNUF MDSNUT MGMTCLAS MIMS MQADMIN
MQCHAN MQCMDS MQCONN MQNLIST MQPROC MQQUEUE
MXADMIN MXNLIST MXPROC MXQUEUE MXTOPIC
NCICSPPT NDSLINK NETCMDS NETSPAN NODES
NODMBR NOTELINK NVASAPDT OIMS OPERCMDS
PCICSPSB PERFGRP PIMS PMBR PRINTSRV PROCACT
PROCESS PROGRAM PROPCNTL PSFMPL PTKTDATA
PTKTVAL QCICSPSB QIMS RACFEVNT RACFHC
RACFVARS RACGLIST RACHCMBR RAUDITX RCICSRES
RDATALIB REALM RIMS RMTOPS RODMMGR ROLE
RRSFDATA RVARSMBR SCDMBR SCICSTST SDSF
SECDATA SECLABEL SECLMBR SERVAUTH SERVER
SFSCMD SIMS SMESAGE SOMDOBS STARTED
STORCLAS SUBSYSNM SURROGAT SYSMVIEW TAPEVOL
TCICSTRN TEMPDSN TERMINAL TIMS TMEADMIN
TSOAUTH TSOPROC UCICSTST UIMS UNIXMAP
UNIXPRIV VCICSCMD VMBATCH VMBR VMCMO VMEVENT
VMLAN VMMAC VMMDISK VMNODE VMPOSIX VMRDR
VMSEGMT VMXEVENT VTAMAPPL VXMBR WCICSRES
WIMS WRITER XCSFKEY XFACILIT

AUTOMATIC DATASET PROTECTION IS IN EFFECT
ENHANCED GENERIC NAMING IS NOT IN EFFECT
REAL DATA SET NAMES OPTION IS INACTIVE
JES-BATCHALLRACF OPTION IS INACTIVE
JES-XBMALLRACF OPTION IS INACTIVE
JES-EARLYVERIFY OPTION IS INACTIVE
PROTECT-ALL OPTION IS NOT IN EFFECT
***

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```

## RACF – System Options

```

Class - svscmvx
File Edit View Communication Actions Window Help

TAPE DATA SET PROTECTION IS INACTIVE
SECURITY RETENTION PERIOD IN EFFECT IS      0 DAYS.
ERASE-ON-SCRATCH IS INACTIVE
SINGLE LEVEL NAMES NOT ALLOWED
LIST OF GROUPS ACCESS CHECKING IS ACTIVE.
INACTIVE USERIDS ARE NOT BEING AUTOMATICALLY REVOKED.
NO DATA SET MODELLING BEING DONE.
PASSWORD PROCESSING OPTIONS:
  PASSWORD CHANGE INTERVAL IS  60 DAYS.
  PASSWORD MINIMUM CHANGE INTERVAL IS  0 DAYS.
  MIXED CASE PASSWORD SUPPORT IS NOT IN EFFECT
  NO PASSWORD HISTORY BEING MAINTAINED.
  USERIDS NOT BEING AUTOMATICALLY REVOKED.
  NO PASSWORD EXPIRATION WARNING MESSAGES WILL BE ISSUED.
  NO INSTALLATION PASSWORD SYNTAX RULES ARE PRESENT.
DEFAULT RVARV PASSWORD IS IN EFFECT FOR THE SWITCH FUNCTION.
DEFAULT RVARV PASSWORD IS IN EFFECT FOR THE STATUS FUNCTION.
SECLEVELAUDIT IS INACTIVE
SECLABEL AUDIT IS NOT IN EFFECT
SECLABEL CONTROL IS NOT IN EFFECT
GENERIC OWNER ONLY IS NOT IN EFFECT
COMPATIBILITY MODE IS NOT IN EFFECT
MULTI-LEVEL QUIET IS NOT IN EFFECT
MULTI-LEVEL STABLE IS NOT IN EFFECT
NO WRITE-DOWN IS NOT IN EFFECT
MULTI-LEVEL ACTIVE IS NOT IN EFFECT
CATALOGUED DATA SETS ONLY, IS NOT IN EFFECT
USER-ID FOR JES NJEUSERID IS : ?????????
USER-ID FOR JES UNDEFINEDUSER IS : ++++++++
PARTNER LU-VERIFICATION SESSIONKEY INTERVAL MAXIMUM/DEFAULT IS      30 DAYS.
APPLAUDIT IS NOT IN EFFECT
***

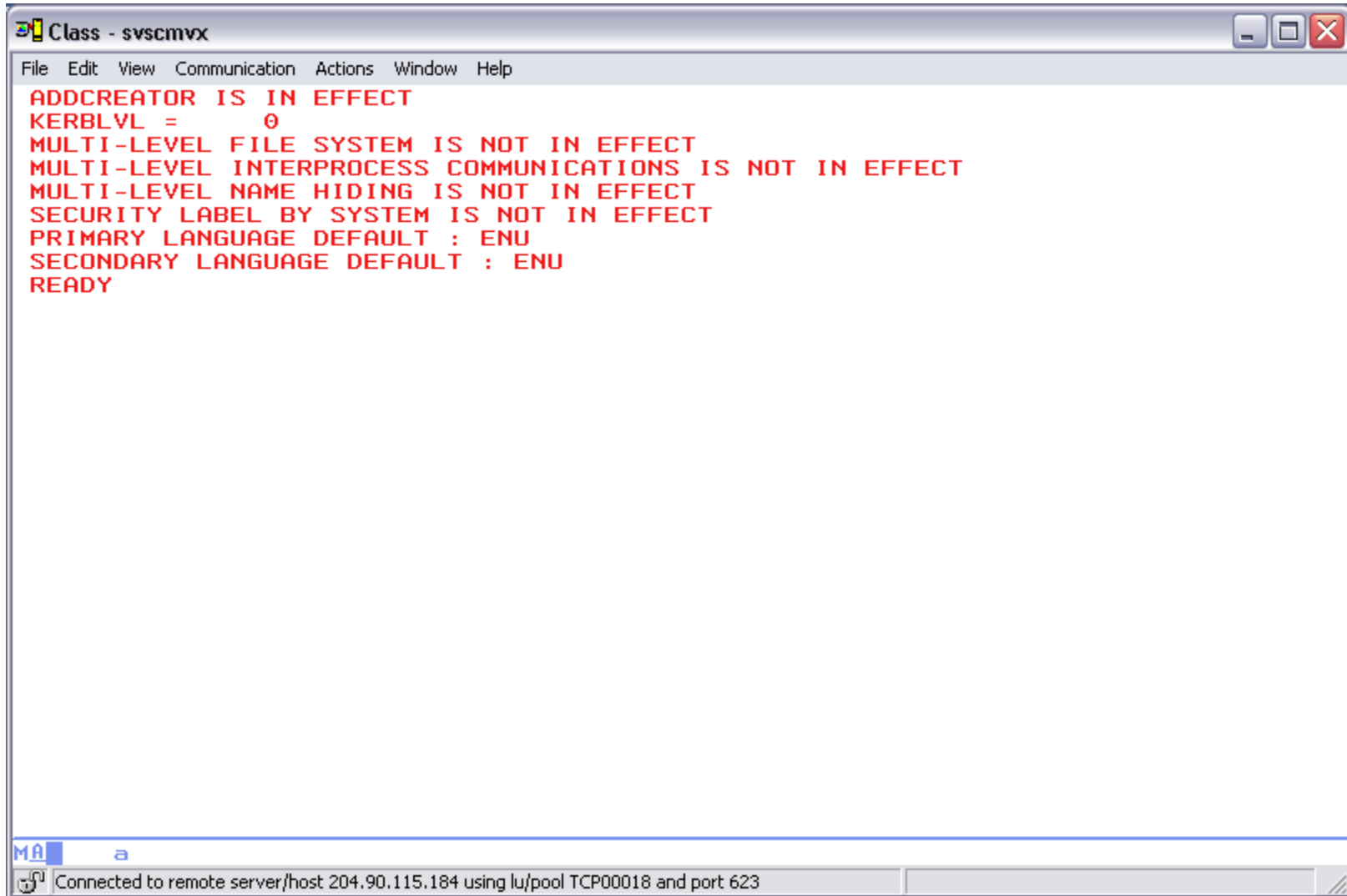
```

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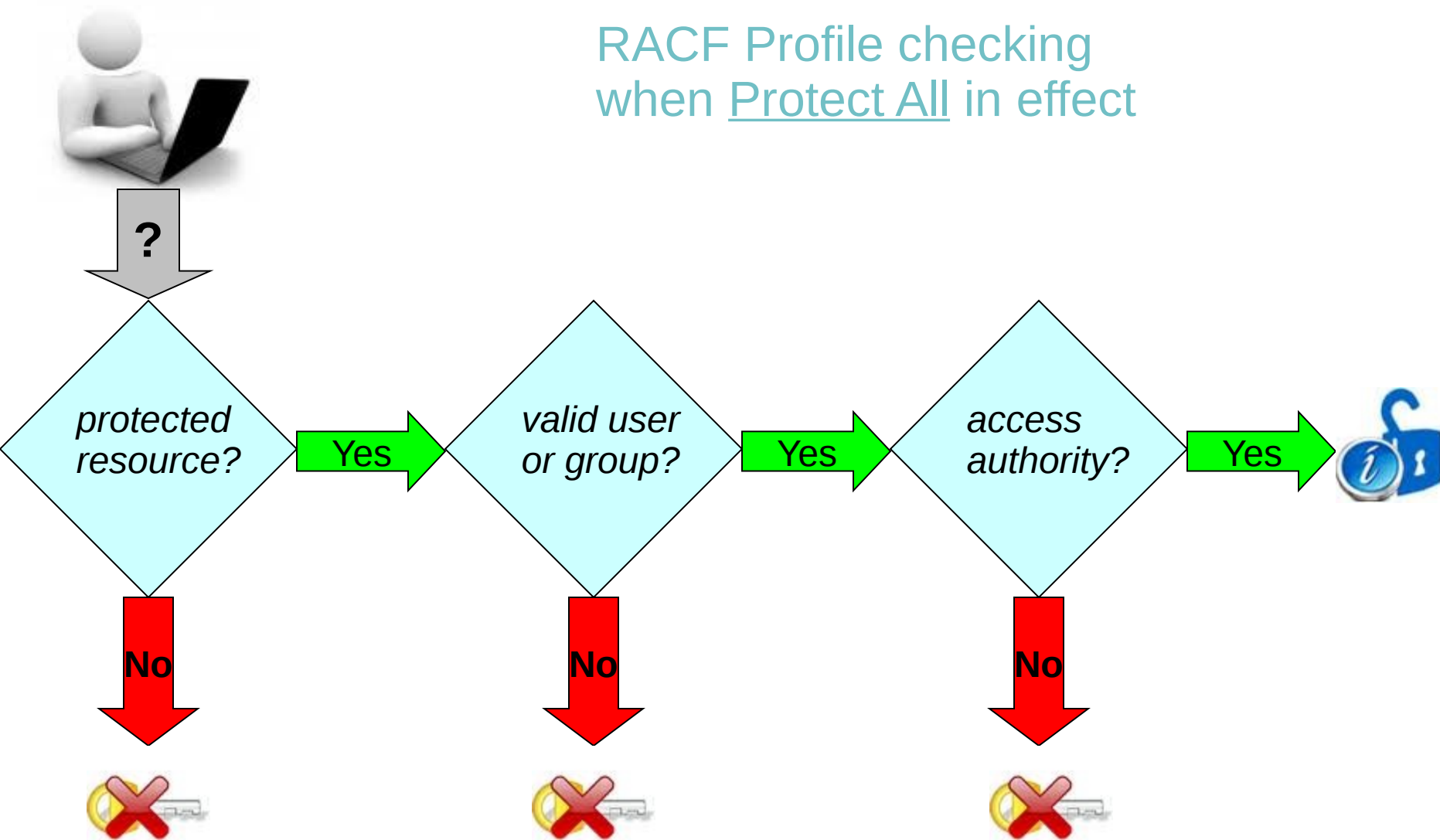
## RACF – System Options



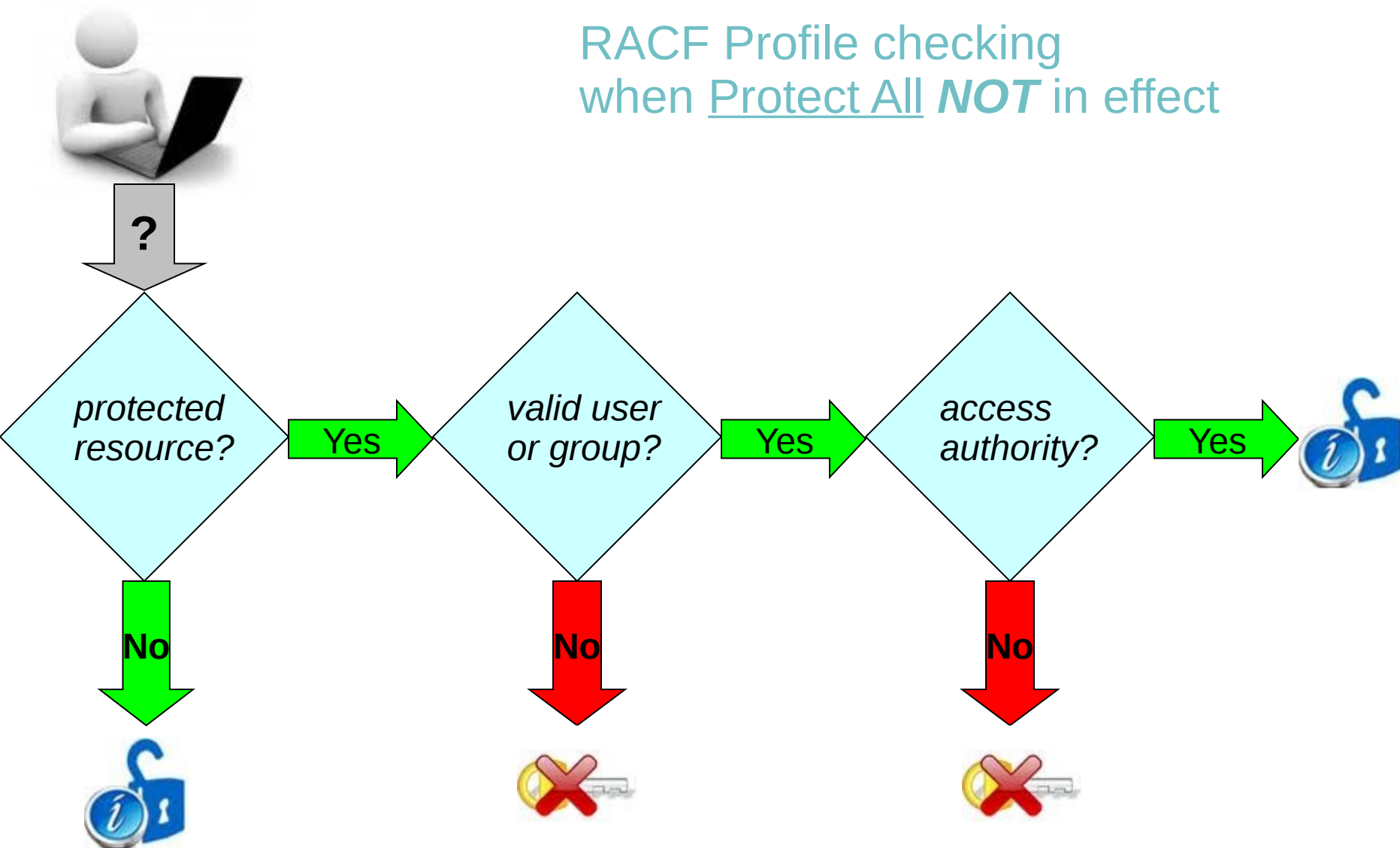
```
Class - svscmvx
File Edit View Communication Actions Window Help
ADDCREATOR IS IN EFFECT
KERBLVL =      0
MULTI-LEVEL FILE SYSTEM IS NOT IN EFFECT
MULTI-LEVEL INTERPROCESS COMMUNICATIONS IS NOT IN EFFECT
MULTI-LEVEL NAME HIDING IS NOT IN EFFECT
SECURITY LABEL BY SYSTEM IS NOT IN EFFECT
PRIMARY LANGUAGE DEFAULT : ENU
SECONDARY LANGUAGE DEFAULT : ENU
READY

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```

## RACF Profile checking when Protect All in effect



## RACF Profile checking when Protect All **NOT** in effect



## RACF – User Profiles

```

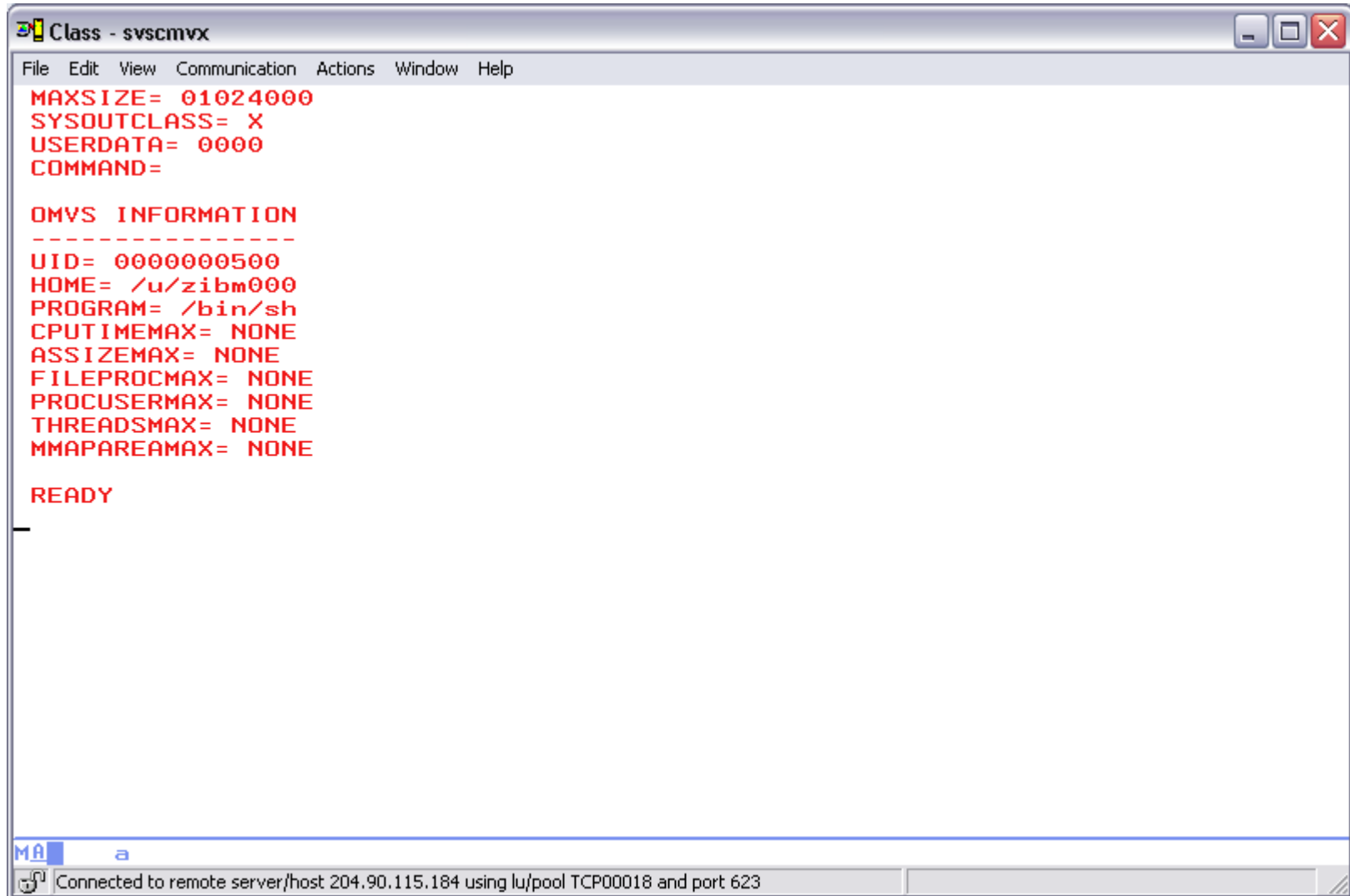
Class - svscmvx
File Edit View Communication Actions Window Help

READY
listuser zibm000 tso omvs
USER=ZIBM000  NAME=UNKNOWN  OWNER=SYS1      CREATED=10.039
DEFAULT-GROUP=GROUP1  PASSDATE=10.040  PASS-INTERVAL= 60  PHRASEDATE=N/A
ATTRIBUTES=OPERATIONS
REVOKE DATE=NONE  RESUME DATE=NONE
LAST-ACCESS=10.048/17:24:24
CLASS AUTHORIZATIONS=NONE
NO-INSTALLATION-DATA
NO-MODEL-NAME
LOGON ALLOWED      (DAYS)      (TIME)
-----
ANYDAY              ANYTIME
GROUP=GROUP1        AUTH=USE      CONNECT-OWNER=SYS1      CONNECT-DATE=10.039
CONNECTS= 74  UACC=NONE      LAST-CONNECT=10.048/17:24:24
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE  RESUME DATE=NONE
SECURITY-LEVEL=NONE SPECIFIED
CATEGORY-AUTHORIZATION
NONE SPECIFIED
SECURITY-LABEL=NONE SPECIFIED

TSO INFORMATION
-----
ACCTNUM= FB3
HOLDCLASS= X
JOBCLASS= A
MSGCLASS= X
PROC= DBPROC9G
SIZE= 00032768
***
MA  a
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```

## RACF – User Profiles



```
Class - svscmvx
File Edit View Communication Actions Window Help
MAXSIZE= 01024000
SYSOUTCLASS= X
USERDATA= 0000
COMMAND=

OMVS INFORMATION
-----
UID= 00000000500
HOME= /u/zibm000
PROGRAM= /bin/sh
CPUTIMEMAX= NONE
ASSIZEMAX= NONE
FILEPROCMAx= NONE
PROCUSERMAX= NONE
THREADSMAX= NONE
MMAPAREAMAX= NONE

READY
_
```

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## RACF – Group Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

READY
listgrp group1 omvs
INFORMATION FOR GROUP GROUP1
SUPERIOR GROUP=SYS1          OWNER=SYS1          CREATED=90.014
INSTALLATION DATA=SYSTEM PROGRAMMING - WIDE AUTHORITY
NO MODEL DATA SET
TERMUACC
SUBGROUP(S)=  GROUPZ      OMVSGRP  TTY          IMWEB      UUCPG      GROUPY
                SSHDG      STCGROUP
USER(S)=        ACCESS=        ACCESS COUNT=        UNIVERSAL ACCESS=
SVTSCU          USE            001680                NONE
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE
DCEADM          USE            000001                RESUME DATE=NONE
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE
IBMUSER         USE            000000                RESUME DATE=NONE
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE
STCOPER         USE            000000                RESUME DATE=NONE
CONNECT ATTRIBUTES=SPECIAL OPERATIONS
REVOKE DATE=NONE
DB2ADM          USE            000000                RESUME DATE=NONE
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE
DB2DAL          USE            000015                RESUME DATE=NONE
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE
USER1           USE            000000                RESUME DATE=NONE
CONNECT ATTRIBUTES=NONE

***
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```

## RACF – Group Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

  REVOKE DATE=NONE
USER2      USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
CICSTS41   USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
CICSTS32   USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
DASUSER    USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM000    USE      000074
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM001    USE      000001
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM002    USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM003    USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM004    USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM005    USE      000000
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE

  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE
  RESUME DATE=NONE
                NONE

***
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```

## RACF – Group Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

  REVOKE DATE=NONE
ZIBM027      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM028      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM029      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM030      USE      000005      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM101      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM102      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM103      USE      000000      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
ZIBM100      USE      000001      RESUME DATE=NONE
                                NONE
  CONNECT ATTRIBUTES=NONE
  REVOKE DATE=NONE
                                RESUME DATE=NONE

OMVS INFORMATION
-----
GID= 0000000000
READY

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```



## RACF – Data Set & General Resource Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

|
READY
ld da('zibm000.*') all
INFORMATION FOR DATASET ZIBM000.* (G)

LEVEL   OWNER   UNIVERSAL ACCESS   WARNING   ERASE
-----
  00    ZIBM000             NONE             NO             NO

AUDITING
-----
FAILURES(READ)

NOTIFY
-----
NO USER TO BE NOTIFIED

YOUR ACCESS   CREATION GROUP   DATASET TYPE
-----
    ALTER          SYS1             NON-VSAM

GLOBALAUDIT
-----
  NONE

NO INSTALLATION DATA

                SECURITY LEVEL
-----
NO SECURITY LEVEL

***

```

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## RACF – Data Set & General Resource Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help
CATEGORIES
-----
NO CATEGORIES

SECLABEL
-----
NO SECLABEL

CREATION DATE   LAST REFERENCE DATE   LAST CHANGE DATE
(DAY) (YEAR)      (DAY) (YEAR)          (DAY) (YEAR)
-----
 039      10      NOT APPLICABLE FOR GENERIC PROFILE

ALTER COUNT   CONTROL COUNT   UPDATE COUNT   READ COUNT
-----
NOT APPLICABLE FOR GENERIC PROFILE

  ID      ACCESS
-----
NO ENTRIES IN STANDARD ACCESS LIST

  ID      ACCESS   CLASS                      ENTITY NAME
-----
NO ENTRIES IN CONDITIONAL ACCESS LIST
READY

```

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## RACF – Data Set & General Resource Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

READY
rlist acctnum * all
CLASS      NAME
-----
ACCTNUM    FB3

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00    IBMUSER      NONE              READ         NO

INSTALLATION DATA
-----
NONE

APPLICATION DATA
-----
NONE

SECLEVEL
-----
NO SECLEVEL

CATEGORIES
-----
NO CATEGORIES

SECLABEL
-----
NO SECLABEL

***

```

MA a

Connected to remote server/host 204.90.115.184 using lu/pool TCP00019 and port 623

## RACF – Data Set & General Resource Profiles

```

Class - svscmvx
File Edit View Communication Actions Window Help

AUDITING
-----
FAILURES(READ)

GLOBALAUDIT
-----
NONE

NOTIFY
-----
NO USER TO BE NOTIFIED

CREATION DATE      LAST REFERENCE DATE    LAST CHANGE DATE
(DAY) (YEAR)        (DAY) (YEAR)          (DAY) (YEAR)
-----
  014   90           014   90           014   90

ALTER COUNT      CONTROL COUNT      UPDATE COUNT      READ COUNT
-----
  000001         000001         000001         000001

USER      ACCESS      ACCESS COUNT
-----
GROUP1    READ            000000
SYS1      READ            000000
DASUSER   READ            000000
ZIBM000   READ            000000
ZIBM001   READ            000000
ZIBM002   READ            000000
ZIBM003   READ            000000
ZIBM004   READ            000000
***

```

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## RACF – Resource Classes

```

Class - svscmvx
File Edit View Communication Actions Window Help

READY
rl
IKJ56700A ENTER CLASS NAME -
tsoauth
IKJ56700A ENTER ENTITY NAME -
*
CLASS      NAME
-----
TSDAUTH    ACCT

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00    SYS1              NONE              READ         NO

INSTALLATION DATA
-----
NONE

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

GLOBALAUDIT
-----
NONE

***

```

MA a

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## RACF – Resource Classes

```

Class - svscmvx
File Edit View Communication Actions Window Help
NOTIFY
-----
NO USER TO BE NOTIFIED

CLASS      NAME
-----
TSOAUTH    CONSOLE

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00    GROUP1      NONE              READ         NO

INSTALLATION DATA
-----
DEFINITIONS TO GET TSO/E EXTENDED CONSOLES

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

GLOBALAUDIT
-----
NONE

NOTIFY
***

```

MA a

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## RACF – Resource Classes

```

Class - svscmvx
File Edit View Communication Actions Window Help

-----
NO USER TO BE NOTIFIED

CLASS      NAME
-----
TSOAUTH    JCL

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00    SYS1              NONE              READ          NO

INSTALLATION DATA
-----
NONE

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

GLOBALAUDIT
-----
NONE

NOTIFY
-----
***

```

MA a

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## RACF – Resource Classes

```

Class - svscmvx
File Edit View Communication Actions Window Help

CLASS      NAME
-----
TSOAUTH    OPER

LEVEL  OWNER      UNIVERSAL ACCESS  YOUR ACCESS  WARNING
-----
  00    SYS1              NONE              READ          NO

INSTALLATION DATA
-----
NONE

APPLICATION DATA
-----
NONE

AUDITING
-----
FAILURES(READ)

GLOBALAUDIT
-----
NONE

NOTIFY
-----
NO USER TO BE NOTIFIED

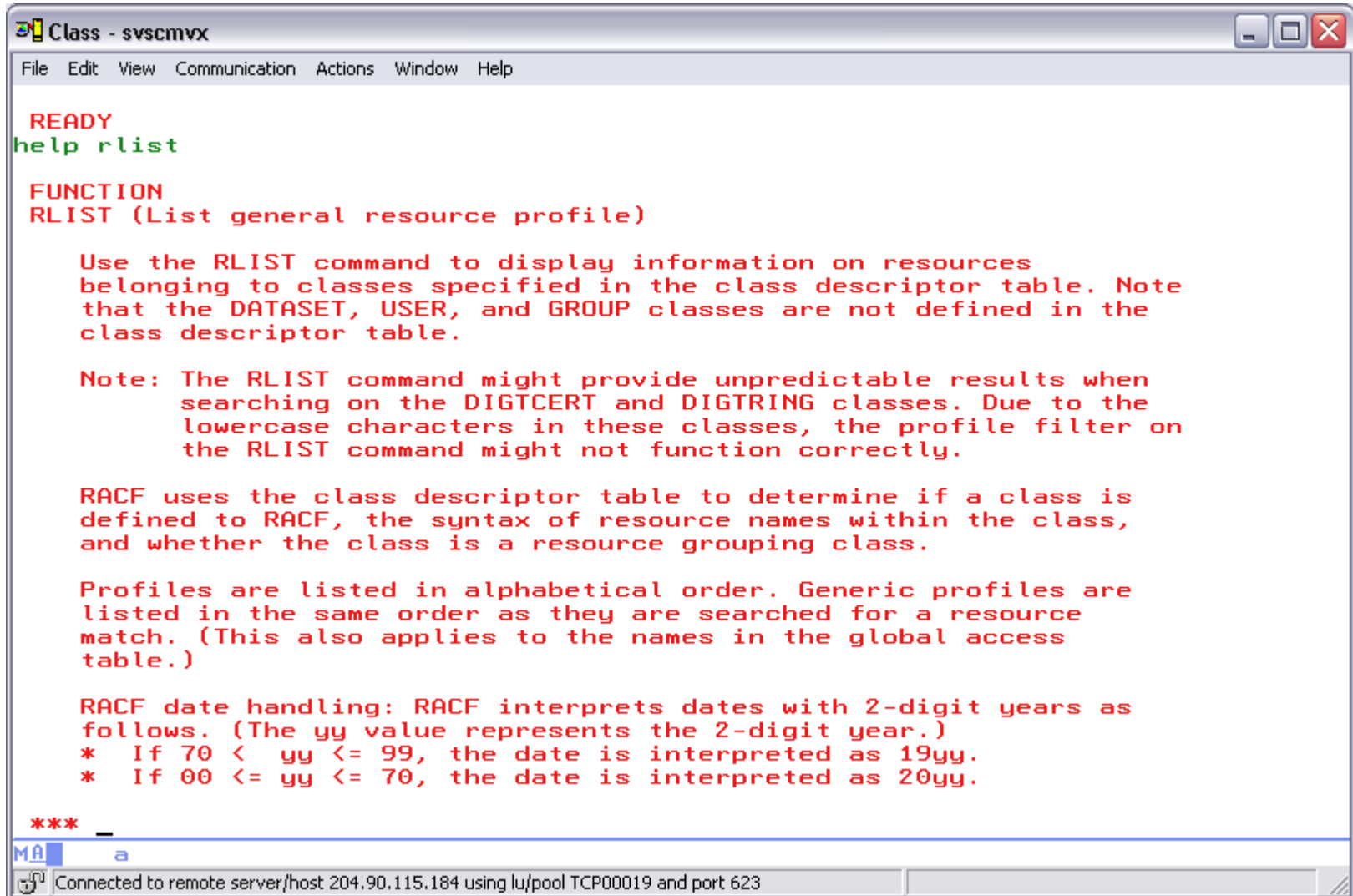
***
MA  a

```

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## RACF – TSO Command Help



```
Class - svscmvx
File Edit View Communication Actions Window Help

READY
help rlist

FUNCTION
RLIST (List general resource profile)

Use the RLIST command to display information on resources
belonging to classes specified in the class descriptor table. Note
that the DATASET, USER, and GROUP classes are not defined in the
class descriptor table.

Note: The RLIST command might provide unpredictable results when
searching on the DIGTCERT and DIGTRING classes. Due to the
lowercase characters in these classes, the profile filter on
the RLIST command might not function correctly.


RACF uses the class descriptor table to determine if a class is
defined to RACF, the syntax of resource names within the class,
and whether the class is a resource grouping class.

Profiles are listed in alphabetical order. Generic profiles are
listed in the same order as they are searched for a resource
match. (This also applies to the names in the global access
table.)

RACF date handling: RACF interprets dates with 2-digit years as
follows. (The yy value represents the 2-digit year.)
* If 70 < yy <= 99, the date is interpreted as 19yy.
* If 00 <= yy <= 70, the date is interpreted as 20yy.

***
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```

## RACF – TSO Command Help


Class - svscmvx

File Edit View Communication Actions Window Help

### Issuing options

The following table identifies the eligible options for issuing the RLIST command:

As a RACF TSO command?	As a RACF operator command?	With command direction?	With automatic command direction?	From the RACF parameter library?
Yes	Yes	Yes	No	Yes

For information on issuing this command as a RACF TSO command or as a RACF operator command, see z/OS Security Server RACF Command Language Reference.


You must be logged on to the console to issue this command as a RACF operator command.

### Related commands

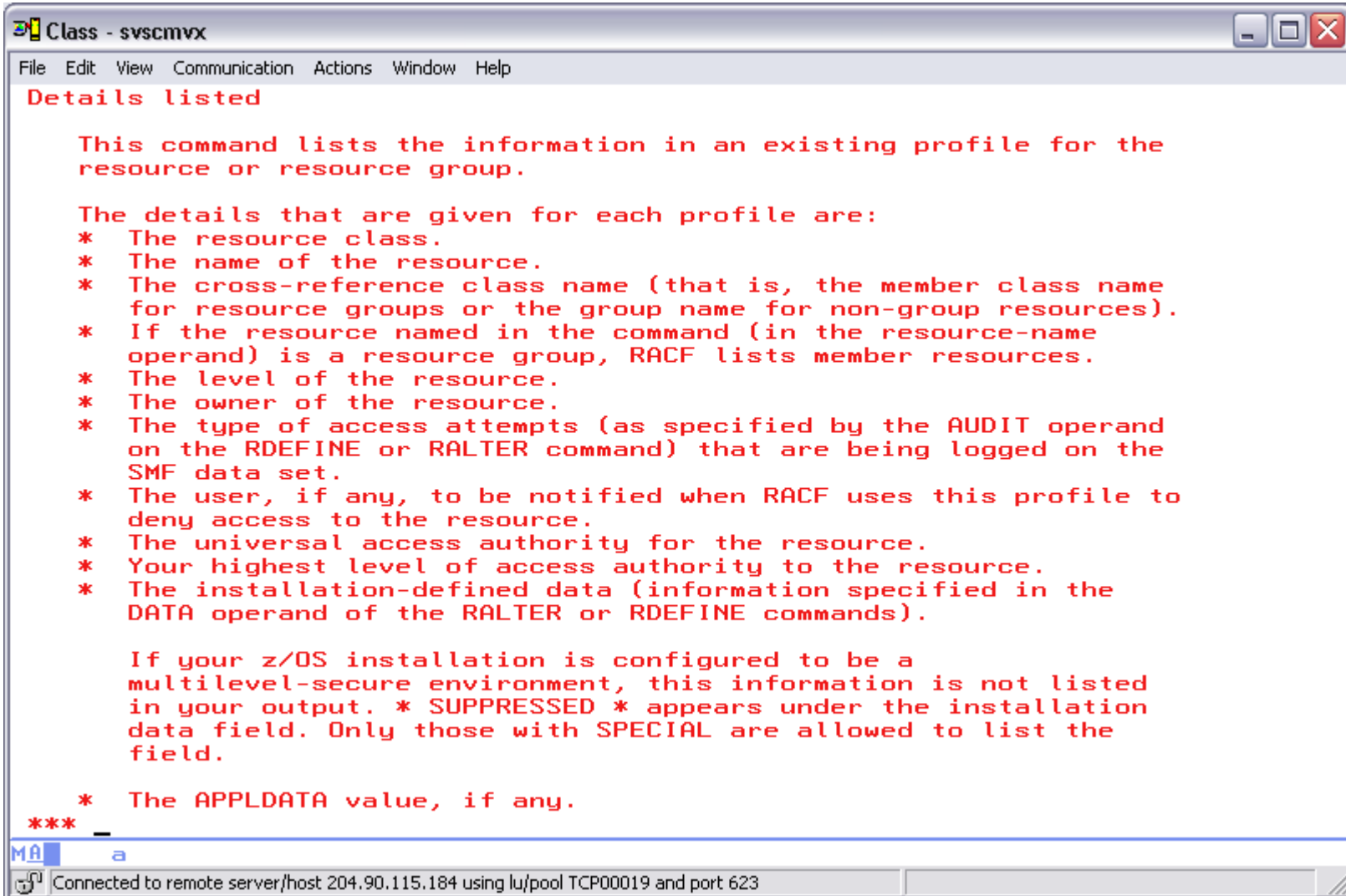
- \* To list a data set profile, see "LISTDSD (List data set profile)".
- \* To list a user profile, see "LISTUSER (List user profile)".
- \* To list a group profile, see "LISTGRP (List group profile)".
- \* To obtain a list of general resource profiles, see "SEARCH (Search RACF database)".

\*\*\*

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 Connected to remote server/host 204.90.115.184 using lu/pool TCP00019 and port 623

## RACF – TSO Command Help



```

Class - svscmvx
File Edit View Communication Actions Window Help
Details listed

This command lists the information in an existing profile for the
resource or resource group.

The details that are given for each profile are:
* The resource class.
* The name of the resource.
* The cross-reference class name (that is, the member class name
  for resource groups or the group name for non-group resources).
* If the resource named in the command (in the resource-name
  operand) is a resource group, RACF lists member resources.
* The level of the resource.
* The owner of the resource.
* The type of access attempts (as specified by the AUDIT operand
  on the RDEFINE or RALTER command) that are being logged on the
  SMF data set.
* The user, if any, to be notified when RACF uses this profile to
  deny access to the resource.
* The universal access authority for the resource.
* Your highest level of access authority to the resource.
* The installation-defined data (information specified in the
  DATA operand of the RALTER or RDEFINE commands).

If your z/OS installation is configured to be a
multilevel-secure environment, this information is not listed
in your output. * SUPPRESSED * appears under the installation
data field. Only those with SPECIAL are allowed to list the
field.

* The APPLDATA value, if any.
***
MA a
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```

## RACF – TSO Command Help

```

Class - svscmvx
File Edit View Communication Actions Window Help

    you have the group-AUDITOR attribute.
    * You have alter access for the profile name from the GLOBAL
      ENTRY TABLE (if this table contains an entry for the profile).
    * If the profile is in the FILE or DIRECTORY class, the second
      qualifier of the profile name is your user ID.
    * For a discrete profile, you are on the access list for the
      resource and you have ALTER authority. (If you have any other
      level of authority, you cannot use the operand.)
    * For a discrete profile, your current connect group (or, if
      list-of-groups checking is active, any group to which you are
      connected) is in the access list and has ALTER authority.
    * For a discrete profile, the universal access authority of the
      resource is ALTER.

SYNTAX
RLIST

The complete syntax of the RLIST command is:

+-----+
| subsystem-prefixRLIST | subsystem-prefixRL |
+-----+
| | class-name |
+-----+
| | (profile-name ...) | * |
+-----+
| | ALL |
+-----+
| | AT(node.userid ...) | ONLYAT(node.userid ...) |
+-----+
***

```

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## RACF – Add User Profile

```

Class - svscmvx
File Edit View Communication Actions Window Help

READY
adduser test
READY
lu test tso omvs
USER=TEST NAME=UNKNOWN OWNER=IBUSER CREATED=10.050
DEFAULT-GROUP=SYS1 PASSDATE=00.000 PASS-INTERVAL= 60 PHRASEDATE=N/A
ATTRIBUTES=NONE
REVOKE DATE=NONE RESUME DATE=NONE
LAST-ACCESS=UNKNOWN
CLASS AUTHORIZATIONS=NONE
NO-INSTALLATION-DATA
NO-MODEL-NAME
LOGON ALLOWED (DAYS) (TIME)
-----
ANYDAY ANYTIME
GROUP=SYS1 AUTH=USE CONNECT-OWNER=IBUSER CONNECT-DATE=10.050
CONNECTS= 00 UACC=NONE LAST-CONNECT=UNKNOWN
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE RESUME DATE=NONE
SECURITY-LEVEL=NONE SPECIFIED
CATEGORY-AUTHORIZATION
NONE SPECIFIED
SECURITY-LABEL=NONE SPECIFIED

NO TSO INFORMATION

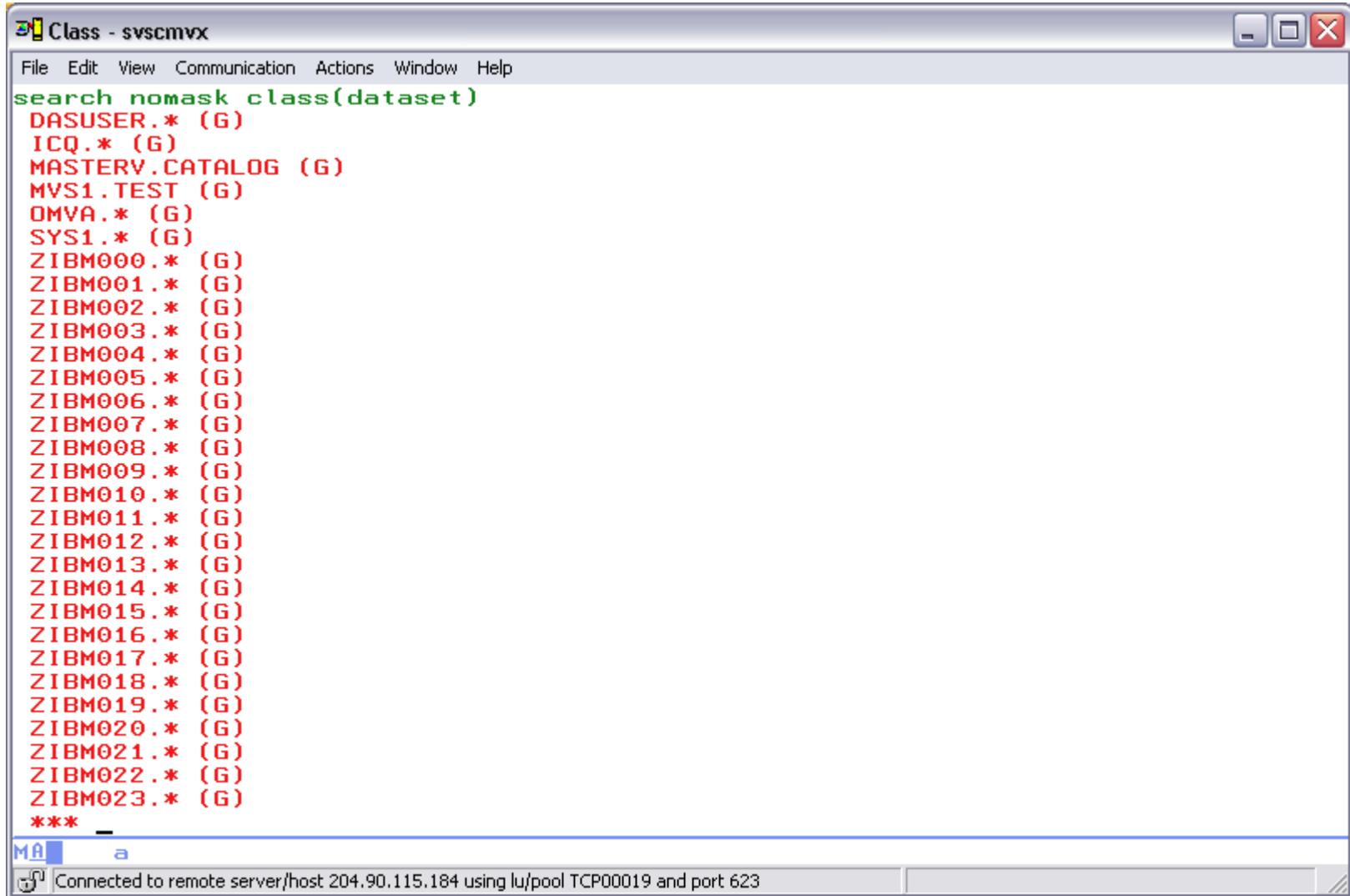
NO OMVS INFORMATION
READY
du test
READY
***

```

MA a

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## RACF – Search



```

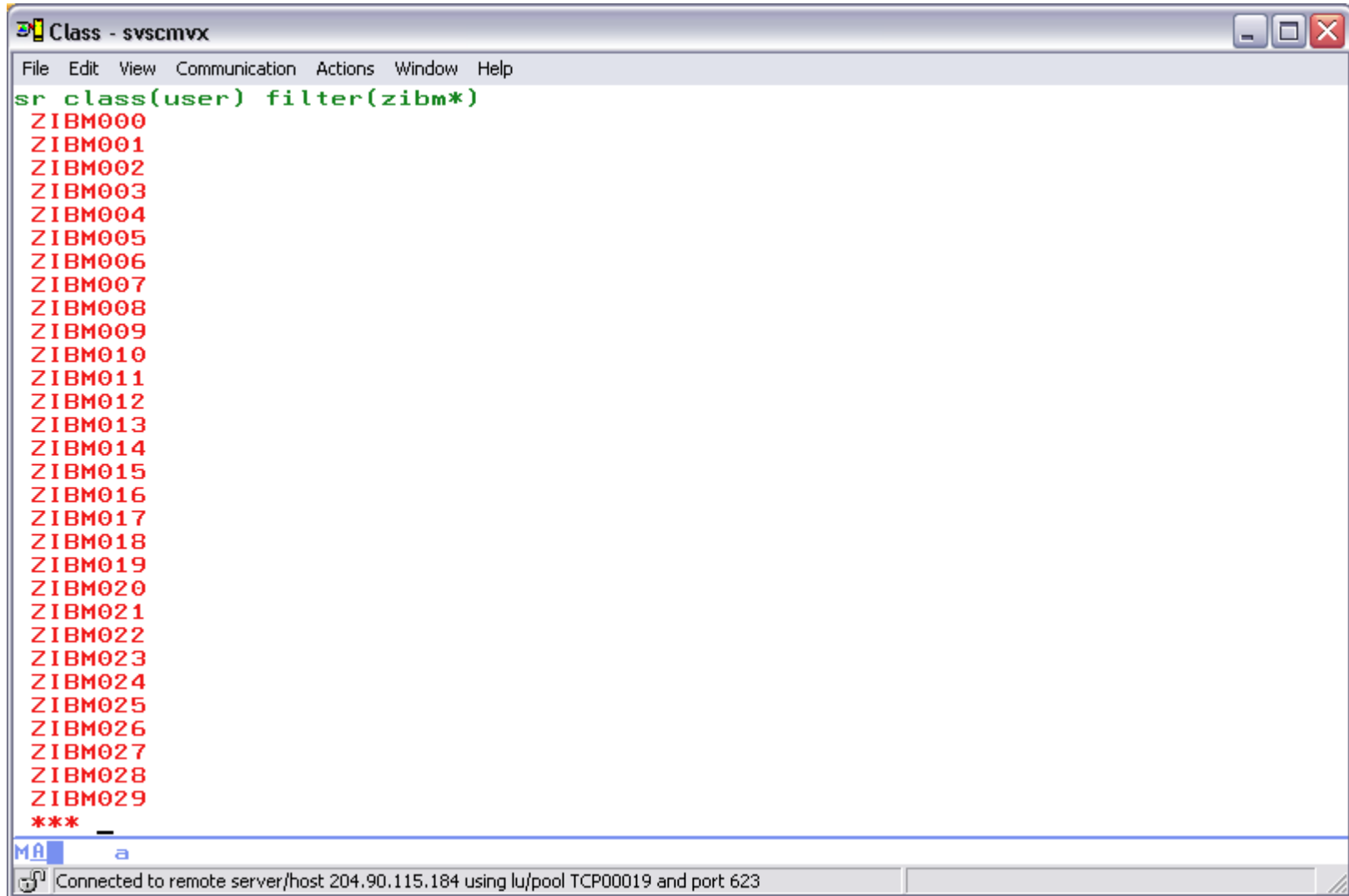
Class - svscmvx
File Edit View Communication Actions Window Help
search nomask class(dataset)
DASUSER.* (G)
ICQ.* (G)
MASTERY.CATALOG (G)
MVS1.TEST (G)
OMVA.* (G)
SYS1.* (G)
ZIBM000.* (G)
ZIBM001.* (G)
ZIBM002.* (G)
ZIBM003.* (G)
ZIBM004.* (G)
ZIBM005.* (G)
ZIBM006.* (G)
ZIBM007.* (G)
ZIBM008.* (G)
ZIBM009.* (G)
ZIBM010.* (G)
ZIBM011.* (G)
ZIBM012.* (G)
ZIBM013.* (G)
ZIBM014.* (G)
ZIBM015.* (G)
ZIBM016.* (G)
ZIBM017.* (G)
ZIBM018.* (G)
ZIBM019.* (G)
ZIBM020.* (G)
ZIBM021.* (G)
ZIBM022.* (G)
ZIBM023.* (G)
***

```

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## RACF – Search



```
Class - svscmvx
File Edit View Communication Actions Window Help
sr class(user) filter(zibm*)
ZIBM000
ZIBM001
ZIBM002
ZIBM003
ZIBM004
ZIBM005
ZIBM006
ZIBM007
ZIBM008
ZIBM009
ZIBM010
ZIBM011
ZIBM012
ZIBM013
ZIBM014
ZIBM015
ZIBM016
ZIBM017
ZIBM018
ZIBM019
ZIBM020
ZIBM021
ZIBM022
ZIBM023
ZIBM024
ZIBM025
ZIBM026
ZIBM027
ZIBM028
ZIBM029
***
MA a
Connected to remote server/host 204.90.115.184 using lu/pool TCP00019 and port 623
```

## RACF – Add User Profile with TSO and Unix Segment

```

Class - svscmvx
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          CLASS.SETUP.JCL($OUT) - 01.00          Columns 00001 00072
Command ==> _ Scroll ==> CSR
***** Top of Data *****
000001 //DEFUSER  JOB 1,NOTIFY=&SYSUID
000002 //ADDID    EXEC PGM=IKJEFT01,REGION=6M
000003 //SYSPRINT DD SYSOUT=*
000004 //SYSTSPRT DD SYSOUT=*
000005 //SYSTEM   DD DUMMY
000006 //SYSTSIN  DD *
000007 mkdir '/u/zibm000'
000008 ADDUSER ZIBM000 PASSWORD(BLUESKY) OPERATIONS -
000009 OWNER(SYS1) DFLTGRP(GROUP1) -
000010 OMVS(HOME('/u/zibm000') PROGRAM('/bin/sh') UID(500)) -
000011 TSO(ACCTNUM(FB3) PROC(DBPROC9G) JOBCLASS(A) -
000012 MSGCLASS(X) HOLDCLASS(X) SYSOUTCLASS(X) -
000013 SIZE(32768) MAXSIZE(1024000))
000014 bpxbatch sh chown ZIBM000:GROUP1 /u/zibm000
000015 PERMIT FB3 CLASS(ACCTNUM) ID(ZIBM000)
000016 PERMIT SPFPROCE CLASS(TSOPROC) ID(ZIBM000)
000017 PERMIT JCL CLASS(TSOAUTH) ID(ZIBM000)
000018 PERMIT ACCT CLASS(TSOAUTH) ID(ZIBM000)
000019 PERMIT MOUNT CLASS(TSOAUTH) ID(ZIBM000)
000020 PERMIT OPER CLASS(TSOAUTH) ID(ZIBM000)
000021 AD 'ZIBM000.*' OWNER(ZIBM000) UACC(NONE) GENERIC
000022 mkdir '/u/zibm001'
000023 ADDUSER ZIBM001 PASSWORD(BLUESKY) OPERATIONS -
000024 OWNER(SYS1) DFLTGRP(GROUP1) -
000025 OMVS(HOME('/u/zibm001') PROGRAM('/bin/sh') UID(501)) -
000026 TSO(ACCTNUM(FB3) PROC(DBPROC9G) JOBCLASS(A) -
000027 MSGCLASS(X) HOLDCLASS(X) SYSOUTCLASS(X) -

```

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# RACF – Adding a TSO and Unix Profile

```

Class - svscmvx
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          CLASS.LAB.EXEC(DEFZID) - 01.01          Columns 00001 00072
Command ==> _____ Scroll ==> CSR

***** ***** Top of Data *****
000001  /* REXX */
000002  "FREE FI(indd)"
000003  "FREE FI(outdd)"
000004  "FREE FI(alias)"
000005  "ALLOC FI(indd)  DA('CLASS.SETUP.JCL($IN)') SHR REUSE"
000006  "ALLOC FI(outdd) DA('CLASS.SETUP.JCL($OUT)') OLD REUSE"
000007  "ALLOC FI(alias) DA('CLASS.SETUP.JCL($ALIAS)') OLD REUSE"
000008  "EXECIO 0 DISKW alias (OPEN "
000009  "EXECIO 0 DISKW outdd (OPEN "
000010  /*****
000011  d.1 = '//DEFALIAS JOB 1,NOTIFY=&SYSUID'
000012  d.2 = '//ALIAS EXEC PGM=IDCAMS'
000013  d.3 = '//SYSPRINT DD SYSOUT=*'
000014  d.4 = '//SYSIN DD *'
000015  "EXECIO 4 DISKW alias (stem d.      "
000016  /*****
000017  l.1 = '//DEFUSER  JOB 1,NOTIFY=&SYSUID'
000018  l.2 = '//ADDID    EXEC PGM=IKJEFT01,REGION=6M'
000019  l.3 = '//SYSPRINT DD SYSOUT=*'
000020  l.4 = '//SYSTSPRT DD SYSOUT=*'
000021  l.5 = '//SYSTEM   DD DUMMY'
000022  l.6 = '//SYSTSIN  DD *'
000023  "EXECIO * DISKW outdd (stem l.      "
000024  /*****
000025  "EXECIO * DISKR indd  (STEM u. FINIS"
000026  do i=1 to u.0
000027  u = space(u.i)

```

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Connected to remote server/host 204.90.115.184 using lu/pool TCP00019 and port 623

## RACF – Adding a TSO and Unix Profile

```

Class - svscmvx
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

VIEW          CLASS.LAB.EXEC(DEFZID) - 01.01          Columns 00001 00072
Command ==>                                         Scroll ==> CSR
000025 "EXECIO * DISKR indd (STEM u. FINIS"
000026 do i=1 to u.0
000027 u = space(u.i)
000028 l=translate(u,'abcdefghijklmnopqrstuvwxyz','ABCDEFGHIJKLMNOPQRSTUVWXYZ')
000029 U=translate(u,'ABCDEFGHIJKLMNOPQRSTUVWXYZ','abcdefghijklmnopqrstuvwxyz')
000030 uid = 499+i
000031 grp = GROUP1
000032 l.1 = " mkdir '/u/'l'"
000033 l.2 = '  ADDUSER 'U' PASSWORD('BLUESKY') OPERATIONS - '
000034 l.3 = '    OWNER(SYS1) DFLTGRP('grp') - '
000035 l.4 = "    OMVS(HOME('/u/'l')) PROGRAM('/bin/sh') UID("uid")) - "
000036 l.5 = '      TSO(ACCTNUM(FB3) PROC(DBPROC9G) JOBCCLASS(A) - '
000037 l.6 = '        MSGCLASS(X) HOLDCLASS(X) SYSOUTCLASS(X) - '
000038 l.7 = '        SIZE(32768) MAXSIZE(1024000))'
000039 l.8 = ' bpxbatch sh chown' U':GROUP1' ' /u/'l
000040 l.9 = '  PERMIT FB3          CLASS(ACCTNUM) ID('U')'
000041 l.10 = '  PERMIT SPFPROCE    CLASS(TSOPROC) ID('U')'
000042 l.11 = '  PERMIT JCL        CLASS(TSOAUTH) ID('U')'
000043 l.12 = '  PERMIT ACCT       CLASS(TSOAUTH) ID('U')'
000044 l.13 = '  PERMIT MOUNT      CLASS(TSOAUTH) ID('U')'
000045 l.14 = '  PERMIT OPER       CLASS(TSOAUTH) ID('U')'
000046 l.15 = '  AD '''U'.*'' OWNER('U') UACC(NONE) GENERIC'
000047 "EXECIO * DISKW outdd (stem l.
000048 /*****
000049 d.1 = '  DEFINE ALIAS(NAME('U') RELATE(CATALOG.USERAA))'
000050 "EXECIO 1 DISKW alias (stem d.
000051 /*****
000052 end
  
```

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## RACF – User Attributes

**SPECIAL** - At the system level can issue all RACF commands and is used only for special users, RACF Administrator. This attribute gives the user full control over all of the RACF profiles in the RACF database.

*Users with the SPECIAL attribute do not have access to all resources, but they can use commands to give themselves access to all resources.*

## RACF User Attributes

**OPERATIONS** - Has full access authorization to all RACF-protected resources in the classes DATASET, DASDVOL, GDASDVOL, PSFMPL, TAPEVOL, VMBATCH, VMCMD, VMMDISK, VMNODE, and VMRDR classes.

## RACF User Attributes

**AUDITOR** - The AUDITOR attribute is given to users who are responsible for auditing RACF security controls and functions. To provide a check and balance on RACF security measures, you should give the AUDITOR attribute to security or group administrators other than those who have the SPECIAL attribute.

## RACF User Attributes

**REVOKE** - You can prevent a RACF user from entering the system by assigning the REVOKE attribute. This attribute is useful when you want to prevent a user from entering the system, but you can or will not use the DELUSER command because the user still owns RACF resource profiles.

# RACF Commands in Batch

```

Class - svscmvx
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

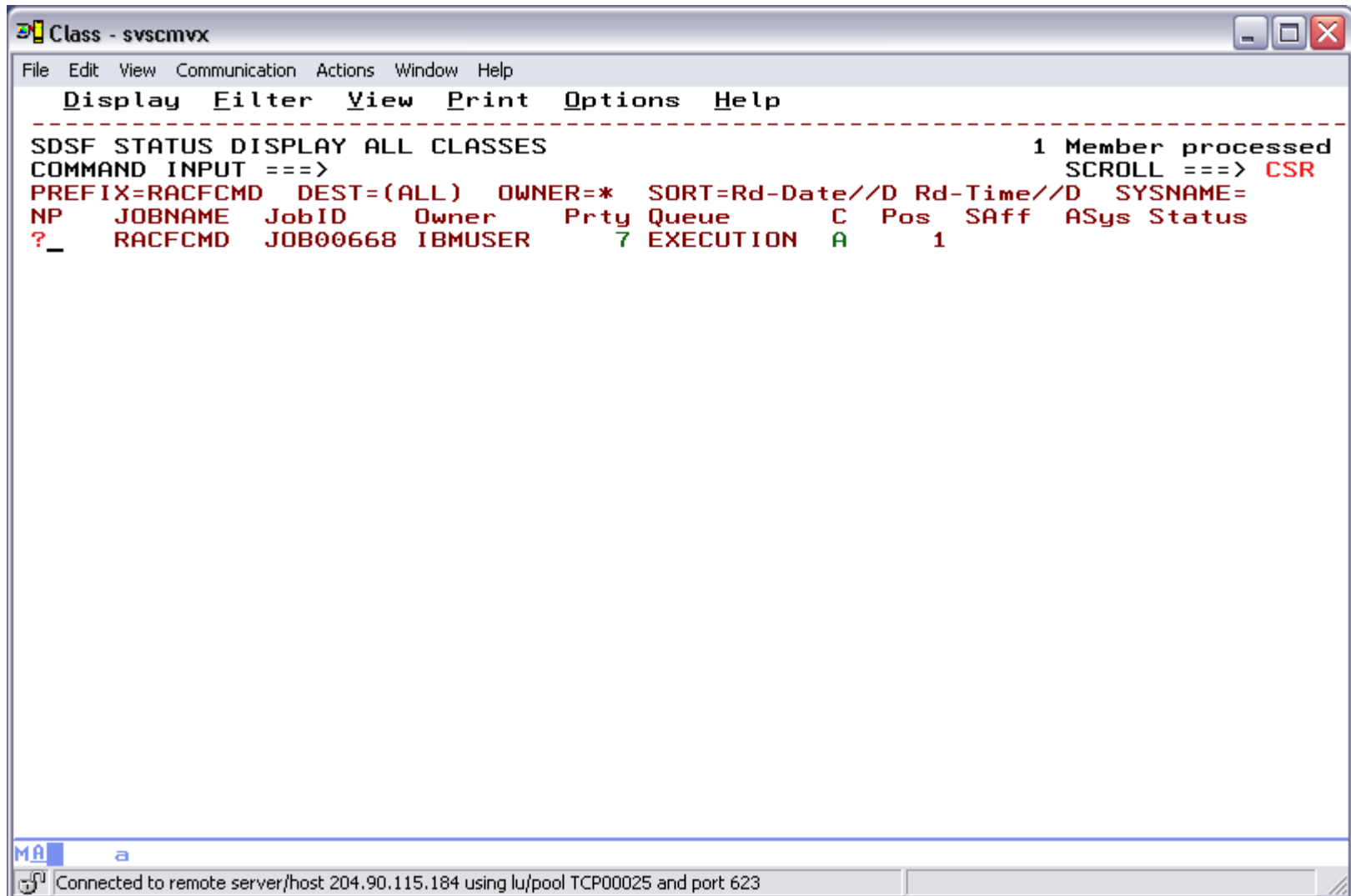
EDIT          CLASS.LAB.JCL(RACFCMD) - 01.00          Columns 00001 00072
Command ==> sub;=sd;prefix racfcmd;st              Scroll ==> CSR
***** ***** Top of Data *****
000100 //RACFCMD   JOB 1,NOTIFY=&SYSUID
000390 //TSO      EXEC PGM=IKJEFT01
000500 //SYSPRINT DD SYSOUT=*
000600 //SYSTSPRT DD SYSOUT=*
000700 //SYSTEM   DD DUMMY
000800 //ISFOUT    DD DUMMY
000900 //SYSTSIN    DD *
001000 LU ZIBM030 TSO OMVS
001010 LD DA('ZIBM030.*') ALL
002100 /*
***** ***** Bottom of Data *****

IKJ56250I JOB RACFCMD(JOB00668) SUBMITTED
***  _

MR a
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```

# RACF Commands in Batch



```


Class - svscmvx
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
SDSF STATUS DISPLAY ALL CLASSES                                1 Member processed
COMMAND INPUT ==>                                           SCROLL ==> CSR
PREFIX=RACFCMD  DEST=(ALL)  OWNER=*  SORT=Rd-Date//D Rd-Time//D  SYSNAME=
NP  JOBNAME  JobID  Owner  Prty Queue  C  Pos  SAff  ASys Status
?_  RACFCMD  JOB00668  IBMUSER  7 EXECUTION  A  1
  
```

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# RACF Commands in Batch


Class - svscmvx

File Edit View Communication Actions Window Help

Display Filter View Print Options Help


SDSF JOB DATA SET DISPLAY - JOB RACFCMD (JOB00668) LINE 1-4 (4)

COMMAND INPUT ==> SCROLL ==> CSR

PREFIX=RACFCMD DEST=(ALL) OWNER=\* SYSNAME=

NP	DDNAME	StepName	ProcStep	DSID	Owner	C	Dest	Rec-Cnt	Page
	JESMSG LG	JES2		2	IBMUSER	W	LOCAL	18	
	JESJCL	JES2		3	IBMUSER	W	LOCAL	8	
	JESYSMSG	JES2		4	IBMUSER	W	LOCAL	15	
s _	SYSTSPRT	TSO		103	IBMUSER	W	LOCAL	103	

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# RACF Commands in Batch

```

Class - svscmvx
File Edit View Communication Actions Window Help
Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY RACFCMD JOB00668 DSID 103 LINE 0 COLUMNS 02- 81
COMMAND INPUT ==> _ SCROLL ==> CSR
***** TOP OF DATA *****
READY
LU ZIBM030 TSO OMVS
USER=ZIBM030 NAME=UNKNOWN OWNER=SYS1 CREATED=10.039
DEFAULT-GROUP=GROUP1 PASSDATE=10.040 PASS-INTERVAL= 60 PHRASEDATE=N/A
ATTRIBUTES=NONE
REVOKE DATE=NONE RESUME DATE=NONE
LAST-ACCESS=10.050/13:00:50
CLASS AUTHORIZATIONS=NONE
NO-INSTALLATION-DATA
NO-MODEL-NAME
LOGON ALLOWED (DAYS) (TIME)
-----
ANYDAY ANYTIME
GROUP=GROUP1 AUTH=USE CONNECT-OWNER=SYS1 CONNECT-DATE=10.039
CONNECTS= 07 UACC=NONE LAST-CONNECT=10.050/13:00:50
CONNECT ATTRIBUTES=NONE
REVOKE DATE=NONE RESUME DATE=NONE
SECURITY-LEVEL=NONE SPECIFIED
CATEGORY-AUTHORIZATION
NONE SPECIFIED
SECURITY-LABEL=NONE SPECIFIED

TSO INFORMATION
-----
ACCTNUM= FB3
HOLDCLASS= X
JOBCLASS= A
MA a

```

Connected to remote server/host 204.90.115.184 using lu/pool TCP00025 and port 623

# RACF Commands in Batch

```

Class - svscmvx
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY RACFCMD  JOB00668  DSID   103 LINE 48      COLUMNS 02- 81
COMMAND INPUT ==> _      SCROLL ==> CSR
READY
LD DA('ZIBM030.*') ALL
INFORMATION FOR DATASET ZIBM030.* (G)

LEVEL  OWNER      UNIVERSAL ACCESS  WARNING  ERASE
-----
  00    ZIBM030          NONE          NO      NO

AUDITING
-----
FAILURES(READ)

NOTIFY
-----
NO USER TO BE NOTIFIED

YOUR ACCESS  CREATION GROUP  DATASET TYPE
-----
    ALTER          SYS1          NON-VSAM

GLOBALAUDIT
-----
  NONE

NO INSTALLATION DATA

          SECURITY LEVEL
-----
MA  a

```

Connected to remote server/host 204.90.115.184 using lu/pool TCP00025 and port 623

# RACF Command

```

Class - svscmvx
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
HGX7760 ----- SDSF PRIMARY OPTION MENU -----
COMMAND INPUT ==> ulog;/>rvar;ulog_                                SCROLL ==> CSR

DA      Active users
I        Input queue
O        Output queue
H        Held output queue
ST       Status of jobs

LOG      System log
SR       System requests
MAS      Members in the MAS
JC       Job classes
SE       Scheduling environments
RES      WLM resources
ENC      Enclaves
PS       Processes

INIT     Initiators
PR       Printers
PUN      PUNCHES
RDR      Readers
LINE     Lines
NODE     Nodes
SO       Spool offload
SP       Spool volumes

RM       Resource monitor
CK       Health checker

ULOG     User session log


END      Exit SDSF

```

MA a

Connected to remote server/host 204.90.115.184 using lu/pool TCP00025 and port 623

# RACF Command


Class - svscmvx

File Edit View Communication Actions Window Help

Display Filter View Print Options Help

SDSF ULOG CONSOLE IBMUSER  
COMMAND INPUT ==> \_


LINE 0  
COLUMNS 21- 100  
SCROLL ==> CSR

```

***** TOP OF DATA *****
16:38:49.41      ISF031I CONSOLE IBMUSER ACTIVATED
16:38:49.41      ->RVARY
16:38:49.52  STC00377  IRR011I (>) OUTPUT FROM RVARY:
                   ICH15013I RACF DATABASE STATUS:
                   ACTIVE USE  NUM VOLUME  DATASET
                   -----
                   YES  PRIM   1 VPMVSH   SYS1.RACFPRM1
                   YES  BACK   1 VPMVSH   SYS1.RACFBCK1
                   ICH15020I RVARY COMMAND HAS FINISHED PROCESSING.
***** BOTTOM OF DATA *****

```

MA a

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# RACF Administrator Utility

```

Class - svscmvx
File Edit View Communication Actions Window Help
File Edit Edit_Settings Menu Utilities Compilers Test Help

EDIT          CLASS.LAB.JCL(RACFRPT) - 01.01          Columns 00001 00072
Command ==> sub; =sd; prefix racfrpt; st           Scroll ==> CSR


***** ***** Top of Data *****
000100 //RACFRPT   JOB 1,NOTIFY=&SYSUID
000200 //RPT1     EXEC PGM=IRRUT200
000300 //SYSRACF   DD DSN=SYS1.RACFPRM1,DISP=SHR
000310 //SYSUT1     DD UNIT=SYSDA,SPACE=(CYL,(10)),
000320 //           DCB=(LRECL=4096,RECFM=F)
000400 //SYSUT2     DD SYSOUT=*
000410 //SYSPRINT   DD SYSOUT=*
000700 //SYSIN       DD *
000800     MAP ALL
000900     INDEX FORMAT
000910     END
000920 //RPT2       EXEC PGM=ICHDSM00
000960 //SYSUT2     DD SYSOUT=*
000970 //SYSPRINT   DD SYSOUT=*
000980 //SYSIN       DD *
000990     FUNCTION ALL
001000 /*
***** ***** Bottom of Data *****

IKJ56250I JOB RACFRPT(JOB00670) SUBMITTED
***  _

MA a
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```

# RACF Administrator Utility


Class - svscmvx

File Edit View Communication Actions Window Help

Display Filter View Print Options Help


SDSF STATUS DISPLAY ALL CLASSES
1 Member processed

COMMAND INPUT ==>
SCROLL ==> CSR


PREFIX=RACFRPT DEST=(ALL) OWNER=\* SORT=Rd-Date//D Rd-Time//D SYSNAME=

NP	JOBNAME	JobID	Owner	PrtY	Queue	C	Pos	SAff	ASys	Status
?_	RACFRPT	JOB00670	IBMUSER	7	EXECUTION	A	1			

MA a

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# RACF Administrator Utility


Class - svscmvx

File Edit View Communication Actions Window Help

Display Filter View Print Options Help

SDSF JOB DATA SET DISPLAY - JOB RACFRPT (JOB00670)
LINE 1-7 (7)

COMMAND INPUT ==>

PREFIX=RACFRPT DEST=(ALL) OWNER=\* SYSNAME=

NP
DDNAME
StepName
ProcStep
DSID
Owner
C
Dest
Rec-Cnt
Page

JESMSG LG
JES2
2
IBMUSER
W
LOCAL
19

JESJCL
JES2
3
IBMUSER
W
LOCAL
13

JESYSMSG
JES2
4
IBMUSER
W
LOCAL
28

SYSUT2
RPT1
103
IBMUSER
W
LOCAL
4

s
SYSPRINT
RPT1
104
IBMUSER
W
LOCAL
1,299

s
SYSUT2
RPT2
105
IBMUSER
W
LOCAL
1,187

SYSPRINT
RPT2
106
IBMUSER
W
LOCAL
21

MA
a

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# RACF Administrator Utility

```

Class - svscmvx
File Edit View Communication Actions Window Help
  Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY RACRPT  JOB00670  DSID   104 LINE 338      COLUMNS 02- 81
COMMAND INPUT ==> _      SCROLL ==> CSR
RACF DATA SET IS 18 PERCENT FULL.
TOTAL NUMBER OF INDEX BLOCKS IN RACF DATA SET 00000011
TOTAL NUMBER OF LEVEL 01 BLOCKS IN RACF DATA SET 00000010
NUMBER OF GROUP      ENTRIES - 0000030
NUMBER OF USER       ENTRIES - 0000078
NUMBER OF DATASET    ENTRIES - 0000041
NUMBER OF ACCTNUM     ENTRIES - 0000003
NUMBER OF APPL        ENTRIES - 0000001
NUMBER OF CBIND       ENTRIES - 0000002
NUMBER OF CIMS        ENTRIES - 0000023
NUMBER OF CONSOLE     ENTRIES - 0000001
NUMBER OF DASDVOL     ENTRIES - 0000001
NUMBER OF DIGTCERT    ENTRIES - 0000032
NUMBER OF DSNR        ENTRIES - 0000032
NUMBER OF EJBROLE     ENTRIES - 0000010
NUMBER OF FACILITY    ENTRIES - 0000013
NUMBER OF FIELD       ENTRIES - 0000004
NUMBER OF GCICSTRN    ENTRIES - 0000001
NUMBER OF GXFACILI    ENTRIES - 0000001
NUMBER OF IIMS        ENTRIES - 0000001
NUMBER OF LIMS        ENTRIES - 0000001
NUMBER OF OPERCMDS    ENTRIES - 0000004
NUMBER OF PROGRAM     ENTRIES - 0000002
NUMBER OF PTKTDATA    ENTRIES - 0000002
NUMBER OF SECLABEL    ENTRIES - 0000004
NUMBER OF SERVER      ENTRIES - 0000032
NUMBER OF STARTED     ENTRIES - 0000074
NUMBER OF TIMS        ENTRIES - 0000006
MA  a
Connected to remote server/host 204.90.115.184 using lu/pool TCP00025 and port 623
  
```

# RACF Administrator Utility

```

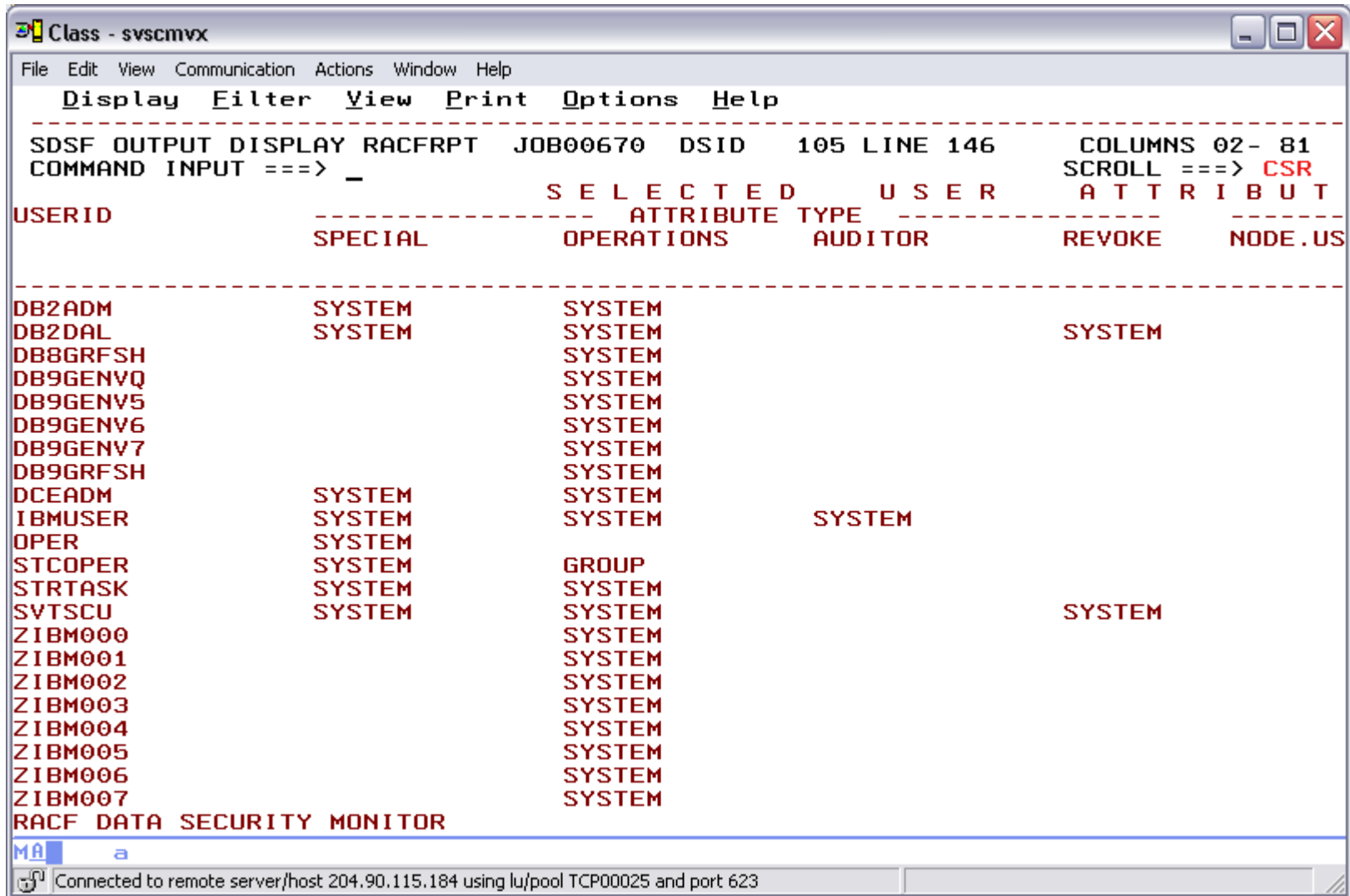
Class - svscmvx
File Edit View Communication Actions Window Help
Display Filter View Print Options Help
-----
SDSF OUTPUT DISPLAY RACFRPT JOB00670 DSID 105 LINE DATA SET DISPLAYED
COMMAND INPUT ==> _ SCROLL ==> CSR
***** TOP OF DATA *****
RACF DATA SECURITY MONITOR
                                     S Y S T E M   R E P O R T
-----
CPU-ID                                0178E0
CPU MODEL                            2097
OPERATING SYSTEM/LEVEL                z/OS 1.11.0
SYSTEM RESIDENCE VOLUME                VIMVSB
SMF-ID                                S0W1
RACF (FMID HRF7760) IS ACTIVE
RACF DATA SECURITY MONITOR
                                     P R O G R A M   P R O P E R T I E S   T A B L
PROGRAM NAME      BYPASS PASSWORD      SYSTEM
                   PROTECTION            KEY
-----
IEDQTCAM          NO                    YES
ISTINM01          YES                   YES
IKTCAS00          NO                    YES
AHLGTF            NO                    YES
HHLGTF            NO                    YES
IHLGTF            NO                    YES
IEFIIC            NO                    YES
IEEMB860          YES                   YES
IEEVMNT2          NO                    YES
IASXWR00          NO                    YES
CSVVFCRE          NO                    YES
HASJES20          NO                    YES
DFSMVRC0          NO                    YES
  
```

MA a

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# RACF Administrator Utility



## RACF Administration – reset password and resume revoked user profile

```
//RACFCMD    JOB 1,NOTIFY=&SYSUID
//STEP1      EXEC PGM=IKJEFT01
//SYSPRINT   DD SYSOUT=*
//SYSTSPRT   DD SYSOUT=*
//SYSTEM     DD DUMMY
//SYSTSIN    DD *
            ALU ZIBM001 PASSWORD(BLUESKY) RESUME
            ALU ZIBM002 PASSWORD(BLUESKY) RESUME
```

## RACF Administration – remove OPERATIONS attribute

```
//RACFCMD    JOB 1,NOTIFY=&SYSUID
//STEP1      EXEC PGM=IKJEFT01
//SYSPRINT   DD SYSOUT=*
//SYSTSPRT   DD SYSOUT=*
//SYSTEM     DD DUMMY
//SYSTSIN    DD *
             ALU ZIBM001 NOOPERATIONS
             ALU ZIBM002 NOOPERATIONS
```

## Professional Manuals and Information

### Security Server (RACF) Bookshelf

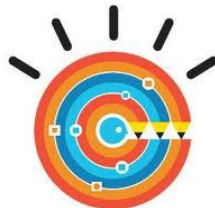
Introduction

Command Language Reference

Auditor's Guide



RACF Web Site



## Unit Summary

Having completed this unit, you should be able to:

- ✓ Describe RACF authentication process
- ✓ Describe SAF base 'element'
- ✓ List RACF commands
- ✓ List RACF options
- ✓ Understand significance of Protect All switch
- ✓ Run RACF administrator and auditor reports
- ✓ Reset passwords