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# **Review of RACF SETROPTS**

**(A Brief Tutorial)**

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# Abstract

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- The SETROPTS command in RACF (mainframe computer security software) is where you set options.
- You can see how the options are set by issuing
- SETR LIST.
- In this session we will review the most important of these options, in the order shown by SETR LIST.
- To make life simpler, we break the listing into **five sections**.
- Note that some options don't show if you don't have AUDITOR.

# Section One, the First Line

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**Looks Like This:**

```
ATTRIBUTES = INITSTATS  
WHEN(PROGRAM – BASIC)  
TERMINAL(READ)  
SAUDIT CMDVIOL OPERAUDIT
```

# Section One, the First Line

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- **ATTRIBUTES = INITSTATS** (timestamp user record)
- **WHEN(PROGRAM – BASIC)** (activates checking in the PROGRAM resource class; BASIC vs. ENHANCED )
- **TERMINAL(READ)** (default terminal access)
- **SAUDIT** (log events only possible because of SPECIAL; two uses)
- **CMDVIOL** (log command violations)
- **OPERAUDIT** (log events only possible because of OPERATIONS; two uses)

# Section Two, the Resource Classes Stuff

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Starts with: **STATISTICS =**

And Ends with:

**LOGOPTIONS "DEFAULT"**

# Section Two, the Resource Classes Stuff

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- **STATISTICS =**
- **AUDIT CLASSES=**
- **ACTIVE CLASSES =**
- **GENERIC PROFILE**
- **GENERIC COMMAND CLASSES**
- **GENLIST CLASSES =**
- **GLOBAL CHECKING CLASSES =**
- **SETR RACLIST CLASSES =**
- **GLOBAL=YES RACLIST ONLY =**

# Section Two, the Resource Classes Stuff

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## The LOGOPTIONS:

- LOGOPTIONS "ALWAYS" CLASSES =
- LOGOPTIONS "NEVER" CLASSES =
- LOGOPTIONS "SUCCESSES" CLASSES =
- LOGOPTIONS "FAILURES" CLASSES =
- LOGOPTIONS "DEFAULT" CLASSES =

# Section Two, the Resource Classes Stuff

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## Some Classes to Consider:

- **DASDVOL, DIGTCERT, DSNR, FACILITY (no backstop), GLOBAL, JESSPOOL, MQADMIN (ssid.RESLEVEL), NODES, OPERCMDS, PROGRAM, PROPCNTL, RACFVARS, SDSF, SERVAUTH, STARTED, SURROGAT, TAPEVOL, TEMPDSN, TSOAUTH, UNIXPRIV, VTAMAPPL, WRITER**



# Section Three, Userid and Dataset Stuff

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**Starts with: AUTOMATIC DATASET  
PROTECTION**

**And Ends with:**

**GROUP DATA SET MODELLING**

# Section Three, Userid and Dataset Stuff

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- **AUTOMATIC DATASET PROTECTION IS NOT IN EFFECT\***
- **ENHANCED GENERIC NAMING IS IN EFFECT**
- **REAL DATA SET NAMES OPTION IS ACTIVE**
- **JES-BATCHALLRACF OPTION IS ACTIVE**
- **JES-XBMALLRACF OPTION IS ACTIVE**
- **JES-EARLYVERIFY OPTION IS NOT ACTIVE\***
- **PROTECT-ALL OPTION IS IN EFFECT**
- **TAPE DATA SET PROTECTION IS ACTIVE**
- **SECURITY RETENTION PERIOD IN EFFECT IS 60 DAYS**

**\* = this option is considered obsolete)**

# Section Three, Userid and Dataset Stuff

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- **ERASE-ON-SCRATCH IS ACTIVE**  
**(ERASE-ON-SCRATCH BY SECLEVEL IS NOT ACTIVE)**
- **SINGLE LEVEL NAME PREFIX IS RACFPFX**
- **LIST OF GROUPS ACCESS CHECKING IS ACTIVE.**
- **INACTIVE USERIDS ARE NOT BEING AUTOMATICALLY REVOKED.**
- **DATA SET MODELLING NOT BEING DONE FOR GDGS. \***
- **USER DATA SET MODELLING IS NOT BEING DONE. \***
- **GROUP DATA SET MODELLING IS NOT BEING DONE. \***

**\* = this option is considered obsolete)**

# Section Four, Password Stuff

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## PASSWORD PROCESSING OPTIONS:

- **PASSWORD CHANGE INTERVAL IS 30 DAYS.**
- **PASSWORD MINIMUM CHANGE INTERVAL IS 2 DAYS.**
- **MIXED CASE PASSWORD SUPPORT IS IN EFFECT.**

# Section Four, Password Stuff

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- **32 GENERATIONS OF PREVIOUS PASSWORDS BEING MAINTAINED.**
- **AFTER 3 CONSECUTIVE UNSUCCESSFUL PASSWORD ATTEMPTS, A USERID WILL BE REVOKED.**
- **PASSWORD EXPIRATION WARNING LEVEL IS 3 DAYS.**

# Section Four, Password Stuff

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## INSTALLATION PASSWORD SYNTAX RULES:

- **RULE 1 LENGTH(4:5) LLLLL**
- **LEGEND:**
- **A-ALPHA C-CONSONANT L-ALPHANUM N-NUMERIC V-VOWEL W-NOVOWEL \*-ANYTHING**
- **c-MIXED CONSONANT m-MIXED NUMERIC v-MIXED VOWEL \$-NATIONAL**
  
- **DEFAULT RVARV PASSWORD IS IN EFFECT FOR THE SWITCH FUNCTION.**
- **DEFAULT RVARV PASSWORD IS IN EFFECT FOR THE STATUS FUNCTION.**

**PASSWORD PHRASES and other password operands belong in a separate tutorial.**

# Section Five, the Other Stuff

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**Starts with:**

**SECLEVELAUDIT IS INACTIVE**

**And Ends with:**

**SECONDARY LANGUAGE DEFAULT : ENU /  
AMERICAN**

**Today we'll consider only one of  
these, leaving the rest of Section  
Five for a separate tutorial.**

# Section Five, the Other Stuff

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- **SECLEVELAUDIT IS INACTIVE**
  - **SECLABEL AUDIT IS IN EFFECT**
  - **SECLABEL CONTROL IS IN EFFECT**
  - **GENERIC OWNER ONLY IS IN EFFECT**
  - **COMPATIBILITY MODE IS IN EFFECT**
  - **MULTI-LEVEL QUIET IS IN EFFECT**
  - **MULTI-LEVEL STABLE IS IN EFFECT**
  - **NO WRITE-DOWN IS IN EFFECT.**
- CURRENT OPTIONS:**
- **"MLS WARNING" OPTION IS IN EFFECT**



# Section Five, the Other Stuff

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- **MULTI-LEVEL SECURE IS IN EFFECT.  
CURRENT OPTIONS:**
- **"MLS WARNING" OPTION IS IN EFFECT**
- **MULTI-LEVEL ACTIVE IS IN EFFECT.  
CURRENT OPTIONS:**
- **"MLACTIVE FAIL" OPTION IS IN EFFECT**
- **CATALOGUED DATA SETS ONLY, IS IN  
EFFECT. CURRENT OPTIONS:**
- **"CATDSNS WARNING" OPTION IS IN  
EFFECT**

# Section Five, the Other Stuff

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- **USER-ID FOR JES NJEUSERID IS :  
?????????**
- **USER-ID FOR JES UNDEFINEDUSER IS :  
+++++**
- **PARTNER LU-VERIFICATION  
SESSIONKEY INTERVAL  
MAXIMUM/DEFAULT IS 30 days**
- **APPLAUDIT IS IN EFFECT**
- **ADDCREATOR IS IN EFFECT**
- **KERBLVL = 0**

# Section Five, the Other Stuff

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**MULTI-LEVEL FILE SYSTEM IS IN EFFECT**

**MULTI-LEVEL INTERPROCESS**

**COMMUNICATIONS IS IN EFFECT**

**MULTI-LEVEL NAME HIDING IS NOT IN  
EFFECT**

**SECURITY LABEL BY SYSTEM IS NOT IN  
EFFECT**

**PRIMARY LANGUAGE DEFAULT : ENU /  
AMERICAN**

**SECONDARY LANGUAGE DEFAULT : ENU /  
AMERICAN**

## Section Five, the Other Stuff

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If **ADDCREATOR** is **IN EFFECT**, then every time someone creates a new dataset rule or resource rule, then his userid is automatically permitted with **ALTER** permission.

**Auditors sometimes react to this.**

# Summary and Call to Action

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**We've Covered the Major Parts of the SETROPTS Listing and What They Mean. We've Indicated Which Ones Might Be Most Important, and the Ones Auditors Will Likely Notice.**

**We Hope This Has Filled In a Few Gaps Or Reminded You of Some Options You Want to Check**

**Thanks for Your Kind Attention**