

z/OS 3.2 IBM Education Assistant

Solution Name: zACS MVS Advanced Scanning

Solution Element(s): IBM z/OS Authorized Code Scanner

July 2025



Agenda

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Trademarks

- See URL <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None

Objectives

- Testing under TSO
 - Programs in the AUTHPGM, AUTHCMD and AUTHTSF tables can undergo addition testing under a TSO environment
- DD name testing
 - Programs expecting DD names to be provided in order to continue processing will be provided with temporary data sets associated with the requested DD name
- Expansion of scope
 - LNKLIST ONLY items included in MVS table when LNKAUTH=LNKLIST
- Configuration file enhancements
 - Expanded use of symbolics
 - Custom location
- zACM Auto-SLIP

Overview

- Who (Audience)
 - Customers looking to mitigate the risk of integrity issues on their systems
 - Vendors looking to mitigate the risk of integrity issues in their products
- What (Solution)
 - Advanced scanning for MVS
 - TSO
 - DD names
 - Usability enhancements
- Wow (Benefit / Value, Need Addressed)
 - The expanded scope of the scanner allows for more integrity flaws to be detected in IBM, vendor, or customer code
 - Enhanced customizability allowing for easier use

Usage & Invocation

- New optional parameter for advanced MVS test:
 - Enables TSO and DD name testing
 - ex 'SYS1.BPN.SBPNEEXEC(BPNKNMVS)'
'<member-name>,<test_type>'
 - 0: Off (default)
 - 1: On
- Enter a '/' for Advanced Test when running options 3* or 9 from the panel

*Do not run option 3 without an include or exclude lists. Programs will be invoked during scanning. AC(1) test programs that are invoked may have undesirable effects on the system. Only product code should be scanned.

```
@-----
                                IBM z/OS Authorized Code Scanner

R  Run Selected Test Option      SL View SVCs Tested Log
S  Generate SVC Table           PL View PCs Tested Log
P  Generate PC Table            AL View MVS Tested Log
A  Generate MVS Table           UL View USS Tested Log
U  Generate USS Table           ST View SVC Table
C  Edit Configuration File      PT View PC Table
M  Edit Module Filter List      AT View MVS Table
J  Edit Job Name Filter List    UT View USS Table
V  View Report                  VS View Report Summary

Test Option:
 1. All SVCs      2. All PCs      3. All MVS      4. All USS
 5. SVC Module . . . . .
 6. SVC Number (hex) . . . . . ESR Routing Number (hex) . . . .
 7. PC Module . . . . .
 8. PC Number (hex) . . . . . PC Sequence Number (hex) . . . .
 9. MVS Member . . . . .
10. USS File Name. _

_ Enter / for Advanced Test

Option ==> █
F1=HELP    F2=SPLIT    F3=END      F4=RETURN   F5=RFIND    F6=RCHANGE
F7=UP      F8=DOWN     F9=SWAP    F10=LEFT   F11=RIGHT   F12=RETRIEVE

Ready
```

Usage & Invocation Part 2

- Updated MVS Table
 - Reflects entry in AUTHPGM, AUTHCMD and AUTHTSF tables
 - Includes LNKLIST ONLY items (LNKAUTH=LNKLIST)
 - The program is not explicitly APF authorized, but is authorized through Inklst

Volume	Member	PGM	CMD	TSF	PPT	LNK	Data Set
-----	-----	----	----	----	----	----	-----
PPLB80	*MISSING	-	-	-	-	-	ADLE370.V1R3M0.SCEERUN
ZDR25B	CSFINIT	N	N	N	0	N	CSF.SCSEFMODE0
ZDR25B	ISFHCTL	N	N	N	4	N	ISF.SISFLOAD
BPN001	BPNTLWB2	N	N	N	-	N	INTEG.BPN.DEVDS.TEST.SBPNLOAD
BPN001	BPNTPGM	Y	N	N	-	N	INTEG.BPN.DEVDS.TEST.SBPNLOAD
BPN001	BPNTTSDD	Y	Y	Y	-	N	INTEG.BPN.DEVDS.TEST.SBPNLOAD
BPN001	BPNTTSF	N	N	Y	-	N	INTEG.BPN.DEVDS.TEST.SBPNLOAD
BPN001	BPNTTSFC	N	Y	Y	-	N	INTEG.BPN.DEVDS.TEST.SBPNLOAD

Usage & Invocation Part 3

- Configuration file keyword `printLogOutput` has new option 'BOTH' to direct output to both the logs and the screen. This setting or 'SCREEN' is required when using the GUI.
- Optional DD on started task to specify configuration file location
 - `//ZACSCONF DD DSN=<config.location>, DISP=SHR`
 - If location not specified or if zACS is not yet running, uses default location `'userid.ZACS.CONFIG'`
- `symbolSubstitutionSupport = 'EXTENDED'`
 - Allows for expanded symbol substitution in the configuration file
 - Symbols must be surrounded by '&' and '.' unless followed by another symbol
 - Default: `'&userid.ZACS.PCNUM'` -> `'IBMUSER.ZACS.PCNUM'`
 - Extended: `'&userid..ZACS.PCNUM'` -> `'IBMUSER.ZACS.PCNUM'`
 - Extended: `'&SYSPLEX&SYSNUM..ZACS.PCNUM'` -> `'LOCAL1.ZACS.PCNUM'`

Usage & Invocation Part 4

- zACM parm has been updated to `PARM=(A,##,description)`
 - 'A' is any capital letter, will be used as the prefix to the SLIP ID for generated SLIPS
 - If Automatic SLIP Setting is not enabled, 'Z' is used as the prefix for the SLIP IDs printed to the potential vulnerability report. Slips will not be automatically set.
 - ## is the matchlim number for First Failure Data Capture
 - To use First Failure Data Capture without enabling the automatic SLIP Setting use `PARM=(##,description)`
 - To use only Automatic SLIP Setting use `PARM=(A)`
 - Description only applies to the BPNZ SLIP (First Failure Data Capture)

Interactions & Dependencies

- Software Dependencies
 - None
- Hardware Dependencies
 - None
- Exploiters
 - None

Upgrade & Coexistence Considerations

- To exploit this solution, all systems in the Plex must be at the new z/OS level: No
- List any toleration/coexistence APARs/PTFs.
 - None

Installation & Configuration

- None

Summary

- MVS advanced scan
 - Scanning under TSO environment for programs in the AUTHPGM, AUTHCMD and AUTHTSF tables.
 - zACS provides missing DD names.
- Expansion of scope
 - LNKLIST ONLY items included when LNKAUTH=LNKLIST
- Configuration file enhancements
 - Expanded use of symbolics
 - Custom location
- zACM Auto-SLIP

Appendix

- Publication
 - [IBM z/OS Authorized Code Scanner Guide](#)