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System Maintenance Aid

Using SMA Under z/VSE

Version 2.1.2

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This document applies to System Maintenance Aid Version 2.1.2.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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Preface

This section contains information relevant when using SMA under VSE/ESA and z/VSE.

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1 Prepare VSE/ESA, z/VSE Parameters

This section describes the parameters relevant for SMA usage under VSE.

> **Note:** In this section, the term "tape" represents any installation media (e.g. tape and CD-ROM) supported by Software AG. The information provided here applies to the use of any of these media.

Adapt Global SMA Parameters

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Global SMA Parameters Used For Commit and Tabload

Global parameters will be used in skeletons SMA-COMMIT, ZAP-COMMIT, TABLOAD2 and SMA-GENERATE-JCL by default. You can modify global parameter settings using the SMA function Administration > Global Parameters.

Parameter Name	Default Value	Function
VSE-DB-ID	1	DBID of the Adabas database
VSE-DB-DEVICE	3390	Device type of the Adabas database
VSE-DEV-CLASS	182	address of tape device
VSE-DSN-ADA-LIB	SAGLIB.ADALIB	Name of sublibrary for Adabas
VSE-DSN-USER-LIB	SAGLIB.USRLIB	Name of the sublibrary containing the executable batch-mode Natural module
VSE-JOB-CLASS	0	Job class
VSE-JOB-DISP	D	Job disposition
VSE-LST-CLASS	Q	List class
VSE-LIB-GROUP	SAGLIB	Name of the library group used as default, when generating the tape copy job from the SMA Tape menu. If the copy job is generated from the user environment, the `LIB-GROUP` parm from the user environment is used instead.
VSE-LST-DISP	D	List disposition
VSE-NAT-BATCH	NATBAT	Name of the executable batch-mode Natural module
VSE-SVC	43	SVC number for Adabas

Global SMA Parameters Used in JCL Skeleton SMA-GENERATE-JCL

These global parameters are used in skeleton SMA-GENERATE-JCL.

Parameter Name	Default Value	Function
VSE-CMWKF02	SMA.WORK02	Name of work data set 2
VSE-CMWKF02-EXT	1,50	Extent of work data set 2
VSE-CMWKF02-VOL	VOL001	Volser of disk containing work data set

Adapt SMA Parameters for Your Environment

You may need to adapt the following SMA parameters to meet your site's requirements. Find the following parameters in your SMA environment (Groups BASIC and OPTION). You can change these parameters in the VSE/SP default environment if you want to use them as default values for all other user environments.

- Library Group Parameters
- VSE/ESA and z/VSE Parameters
- Job Parameters
- CICS Parameters
- VSAM Parameters

Library Group Parameters

These parameters are related to SMA library usage. See also the section Concepts, Library Organization.

Parameter Name	Default Value	Function
LIB-GROUP	SAGLIB	Label of the standard library for SAG products
LIB-VOL	VVVVVV	Default volume of the library for SAG products
LIBRARY	SMA.SAGLIBRARY	The standard library name for SAG products

VSE/ESA and z/VSE Parameters

Parameter Name	Default Value	Function
DSNPUNCH1	SMA.SYSPCH.ONE	Data set name of the first work data set for SYSPCH
DSNPUNCH2	SMA.SYSPCH.TWO	Data set name of the second work data set for SYSPCH
DSNPUNCH3	SMA.SYSPCH.THREE	Data set name of the third work data set for SYSPCH
DYNCLASS	C	Specify dynamic job class for job card (if dynamic class required)
ESA-31BIT	blank	Must be set to Y if Natural is to be used in 31-bit mode under VSE/ESA. Blank otherwise.
EXTPUNCH1	1,150	Extent of the first work data set in conjunction with CA DYNAM/D. A value of 1 may be defined for starttrck.
EXTPUNCH2	1,150	Extent of the first work data set in conjunction with CA DYNAM/D. A value of 1 may be defined for starttrck.
EXTPUNCH3	1,150	Extent of the first work data set in conjunction with CA DYNAM/D. A value of 1 may be defined for starttrck.
H-ASM	N	Must be set to Y if H-Assembler is to be used
SLILIB	PRD2.PROD	Sublibary of VSE system library containing SLI books
SYSIPT	FEC	Physical unit address of SYSIPT
SYSPCH	FED	Physical unit address of SYSPCH
USRLIB	USRLIB	User load library (sublib) for SAG products. SMA will link all user-specific phases into this sublib.
VOLPUNCH1	VVVVVV	Volume of the first work data set for assemblies and some utilities. SMA requires a sequential work file on disk. In conjunction with CA DYNAM/D, a pool-name may be defined here.
VOLPUNCH2	VVVVVV	Volume of the second work data set for assemblies and some utilities. SMA requires a sequential work file on disk. In conjunction with CA DYNAM/D, a pool-name may be defined here.
VOLPUNCH3	VVVVVV	Volume of the third work data set for assemblies and some utilities. SMA requires a sequential work file on disk. In conjunction with CA DYNAM/D, a pool-name may be defined here.
VSE-ESA24	N	Use value Y for VSE/ESA 2.4 or above. Use value N for VSE/ESA 2.3 or below.
VTAPE	N	Use value Y for Virtual Tape Support in your environment. Otherwise use value N.
VTAPE-CDROM	D:	CD-ROM device used for virtual tape server
VTAPE-PORT	2386	Port number of virtual tape server
VTAPE-TCPIP-ADDR	111.111.111.111	TCPIP address of virtual tape server

Parameter Name	Default Value	Function
VTAPE-UNIT	192	CUU of virtual tape device

Job Parameters

Parameter Name	Default Value	Function
DEV-CLASS	CUU	Physical unit address of the tape device
DISPOSITION	D	Disposition on job statement
JOB-PREFIX	SMA	Job name prefix of SAG installation jobs, first 3 characters of job name
JOBCLASS	0	Job class on job statement
LISTCLASS	Q	Power list class for job output
LISTDESTINATION	*	List destination (VM) on job statement
LISTDISPOSITION	D	Power list disposition for job output

CICS Parameters

Parameter Name	Default Value	Function
ADA-ENHANCED-INST	N	Use value Y for enhanced Adabas installation. Use value N for standard Adabas installation.
CICLIB	CICLIB	User load library (SUBLIB) for CICS-installed products
CICS-SUBLIB	PRD2.PROD	CICS sublibrary of VSE system library
CICS-TS1-1	N	Use value Y for CICS/TS1.1. Use value N for old CICS/VS 2.3.
CICS2-2	Y	CICS uses 31-bit addressing. Use value N if CICS version is below 2.2 or the parameter CICS-TS1-1 is set to Y.

VSAM Parameters

Parameter Name	Default Value	Function
VSAM-UCAT	UCATT	Short name of VSAM user catalog (has to be in standard labels)
VSAM-UCATVOLUMES	SYSWK1	Volumes containing the VSAM user catalog
VSAM-USERCATALOG	VSESP.USER.CATALOG.TEST	Long name of VSAM user catalog (has to be in standard labels)

2   **Important JCL Skeletons**

This section describes the most important JCL skeletons related to VSE usage.

🛑 **Caution:** Be aware that if you change skeletons in the default environment, they will no longer be overwritten by Software AG.

Copy Steps

This skeletons are used when copying from tape to disk. Special tape handling procedures can be included here.

Skeleton Name	Function
COPY-PS-SUB	Restore product libraries from tape to disk into sublibrary with MSHP archive
COPY-PS-SUB3	Restore correction libraries from tape to disk into sublibrary and copy from correction library to product library
COPY-PS-SUB4	Restore job example libraries from tape to disk into sublibrary
COPY-PS-SUB5	Restore product libraries from tape to disk into sublibrary without copy or MSHP archive
COPY-CD-SUB	Restore product libraries from virtual tape to disk into sublibrary with MSHP archive
COPY-CD-SUB3	Restore correction libraries from virtual tape to disk into sublibrary and copy from correction library to product library
COPY-CD-SUB4	Restore job example libraries from virtual tape to disk into sublibrary
COPY-CD-SUB5	Restore product libraries from virtual tape to disk into sublibrary without copy or MSHP archive

Commit Steps

Skeleton Name	Function
SMA-COMMIT	Used to set the status of products within SMA (set installed). The final installation step, which informs SMA that all jobs have been completed successfully, runs in an existing Natural environment and not necessarily in an environment created by SMA. Therefore, it is usually necessary to adapt the skeleton SMA-COMMIT to the existing environment. Ensure that only global parameters (see Global Parameters in section Menus and Line Commands) are used in this skeleton.
ZAP-COMMIT	Used to set the status of Zaps within SMA (applied). The JCL skeleton ZAP-COMMIT is used to generate the last step in the jobs which apply or undo Zaps. This skeleton must be modified for the default environment VSE/SP. Ensure that only global parameters (see Global Parameters in section Menus and Line Commands) are used in this skeleton.

Other Steps

Skeleton Name	Function
JOB-INIT	This skeleton is used as job card for all jobs generated and submitted by SMA
ADA-FILES	This skeleton contains the file definitions of the Adabas databases
TABLOAD2	This skeleton contains JCL used for the Tabload function in SMA
SMA-GENERATE-JCL	The JCL skeleton SMA-GENERATE-JCL is used to generate the installation JCL in batch mode using the line command JB in the Environment menu. It may be modified in a user environment.

3 Sequence of Generated Jobs

This section describes the sequence of SMA-generated jobs.

Four groups of jobs are generated (*xxx* represents a three-digit number):

- T*xxx*: Tape copy jobs. These jobs copy the libraries and the marked data sets. One job is generated per tape.
- P*xxx*: Preparatory jobs. These jobs perform preparatory tasks for the installation.
- I*xxx*: Installation jobs. The last I*xxx* job changes the status of products and parameters from status *to be installed* to *installed*.
- Other jobs are example jobs, which might be useful to the user, but are not part of the product installation.

Job Name	Description
P060	Preparation instructions
P080	Delete/Define VSAM clusters
I003	Create conversion jobs
I005	Update CICS tables
I008	Allocate data sets
I009	Copy data sets
I011	Install Adabas SVC
I020	Adabas IOR parameters and defaults
I025	Com-plete installation steps
I030	Define and format the Adabas database
I035	Unzip files from tape
I040	Start the Adabas nucleus
I041	Update nucleus startup (SMP)

Job Name	Description
I042	Read-Only nucleus startup (SMP)
I043	Read-Only nucleus startup (SMP)
I044	Read-Only nucleus startup (SMP)
I046	Review Hub startup
I050	Load Adabas files into database
I051	Migration job
I052	Define VSAM data sets
I053	DLI PSB/DBD/ACB generation
I055	Assemblies for batch-mode Natural
I056	Assembly/Links jobs
I060	Assemble the Natural parameter module and link batch-mode Natural
I061	Load Natural applications with INPL
I065	Example jobs to test NATBAT
I070	Preparations for linking online-mode Natural
I071	Copy Natural objects
I075	Auxiliary jobs for online-mode Natural
I080	Assemble the Natural parameter module and link online-mode Natural
I081	Initialize VSAM roll files
I082	Migration job
I088	Link the Adabas Link modules
I090	Setup products
I100	Readme only
I200	Setup jobs
I500	Migration jobs
I999	SMA: commit environment, tapes and/or library corrections; generate Environment Report
E100	Load example jobs
E600	Predict migration steps
Z010	Apply Zaps
Z020	Load corrections with INPL

Note: The above table does not contain the complete list of jobs. New jobs may be introduced as needed.

4   Load SMA Tables from a Tape and Copy Data Sets to Disk

This section provides an overview of the parameters used during loading of SMA tables and copy steps.

Loading the SMA Tables from a Tape (Tabload)

During the loading of SMA tables from a tape (Tabload), the library group definition is taken from the global variable VSE-LIB-GROUP and is stored into the field Library Grp for each data set on the tape (see Copy Parameters screen below).

```
08:31:54                *** SYSTEM MAINTENANCE AID ***                 2005-10-10
User:  SAG                     - Copy Parameters -                       TPCDSM11
Volser .....  T78063
Name on tape  ADA743.LIBR
Description .........  VSE LIBR backup S=SAGLIB.ADA743
Symbolic Dataset Name  ADA743.LIBR
Dataset Organization   PS-SUB
Size (Kilo byte) ....  652

Dataset created on ..  2005-10-07  08:01:50
Dataset copied on....
RESTORE on SUBLIB ...    ADA743


Library Grp    SAGLIB_____
Name on Disk   _____
Disk .......   _____
Device Type    _____


Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit                                                    Canc
```

To change the library group after loading the SMA tables from a tape, go to each data set (T(ape) > DA(taset) > MO(dify)) and change the Library Grp field.

📄 **Note:** A change of the global variable VSE-LIB-GROUP after loading from a tape will have no effect on the data set entries or copy steps.

Mark a Data Set for Copy

Enter the tape menu and the line command MA for a specific tape.

```
09:07:18              ***  SYSTEM MAINTENANCE AID  ***              2005-10-10
User:  SAG                  - Datasets On Tape -                      TPPDSM11
Page:  3   sorted by   Volser: T78063                               Rec: 0062
     ---->
Code Dataset Name        Description                      On Disk As          C
     *_____     *_____  *_____  *
  __   ADA743.EMPL        Employees File
  __   ADA743.ERRN        Error Messages File
  __   ADA743.INPL        INPL dataset
  MA   ADA743.Libr        VSE LIBR backup S=SAGLIB.ADA74  SAGLIB.ADA743
  __   ADA743.MISC        Miscellaneous file
  __   ADA743.Z000        VSE 000.Zap Summary




Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit  Sort  Prnt  --    -     +     ++          >     Canc
```

If you mark (MA) a data set for copy, the data set field Name on Disk Disk (see below) will be filled with the value of Library Grp and RESTORE on SUBLIB. The field Library Grp has already been stored at load time (Tabload). A mark for copy will also be performed automatically by SMA, if a JCL generation from a user environment is performed. All data sets that are needed more than once during installation or operation of the product, (i.e. LIBR or correction data sets L00n) will be marked for copy by SMA, before the job generation starts. Other data sets that are needed only once (i.e. INPL or ERRN data sets) will always be loaded directly from tape.

Enter the line command MO for a specific data set on tape.

```
08:31:54                 ***  SYSTEM MAINTENANCE AID  ***              2005-10-10
User:  SAG                      - Copy Parameters -                     TPCDSM11
Volser .....   T78063
Name on tape  ADA743.LIBR

Description .........  VSE LIBR backup S=SAGLIB.ADA743
Symbolic Dataset Name  ADA743.LIBR
Dataset Organization   PS-SUB
Size (Kilo byte) ....  652

Dataset created on ..  2005-10-07  08:01:50
Dataset copied on....  2005-10-10  08:38:54
RESTORE on SUBLIB ...  ADA743
Library Grp    SAGLIB_____
Name on Disk   SAGLIB.ADA743_____
Disk .......   SAGVOL
Device Type    3390___


Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit                                                    Canc
```

Generate Copy Job from the Tape Menu

Enter the tape menu and the line command `JC (Generate JCL)`.

```
09:10:29                 ***  SYSTEM MAINTENANCE AID  ***              2005-10-10
User:  SAG                      - Archived Tapes -                      TPVOLM11
Page:  1    sorted by                                                   Rec: 0001
     ---->
Code Volser    Description                              Add Date
     *_____    *_____  *_____
 JC  T78063    ADABAS ADA743                               2005-10-07




Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit  Sort  Prnt  --    -     +     ++          Prod  Canc
```

The copy job will be generated.

```
10:09:03                    *** SYSTEM MAINTENANCE AID ***               2005-10-10
User:  SAG                      - Generated Tape Jobs -                   TPJOBM11
Reposition to Job: _____                         Tape: T78063
  Cmd         Job             Description                        Status
   __         T063            COPY DATASETS FROM TAPE            Open




Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit  --    ++          -     +     Print              Canc
```

The involved skeletons for copying data sets all start with COPY-* (i.e. COPY-PS-SUB, COPY-CD...). Depending on the Dataset Organization in the data set parameters the corresponding skeleton will be selected. (i.e. if the Dataset Organization parameter is PS-SUB, then the skeleton COPY-PS-SUB is selected).

Generate Copy Job from User Environment

Enter the environment menu and the line command JC (Generate JCL).

```
07:31:52            ***     SYSTEM MAINTENANCE AID     ***           2005-09-27
User:  SAG                  - Environment Maintenance -                 ENMENM11
Page: 1
                                                          Rec: 0007
Code Environment     Description
     *_____        *_____
 JC  PROD1           PRODUCTION 1
 __  PROD2           PRODUCTION 2
 __  SMA             SMA INSTALLATION
 __  TDEV            DEVELOPMENT
 __  TEST1           TEST INSTALLATION 1
 __  TEST2           TEST INSTALLATION 2
 __  VSE/SP          DEFAULT-ENVIRONMENT FOR VSE/SP



Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit  Sort  Prnt  --    -     +     ++                 Canc
```

The copy job will be generated.

```
07:51:23           ***      SYSTEM MAINTENANCE AID    ***            2005-09-28
 User:  SAG              - Generated Environment Jobs -                ENJOBM11
 Page: 1                     Environment: PROD1                        Rec: 0021
 Code     Job          Description                        Status
          *_____   *_____     *_____
  __      Report       Installation Guide                 Open
  __      T063         COPY DATASETS FROM TAPE            Open
  __      P060         READ ME; DO NOT SUBMIT             Open
  __      I011         INSTALL TEMPORARY ADASVC           Open
  __      I020         ADABAS IOR PARM AND DE  SE         Open
  __      I055         ASSEMBLIES OF BATCH NATURAL        Open
  __      I088         LINK EDITS WITH ADALINK            Open
  __      I999         SMA COMMIT AND ENV. REPORT         Open



 Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Menu  Exit        Prnt  --    -     +     ++    Refr        Canc
```

The LIB-GROUP parameter in the user environment PROD1 will be used.