System Maintenance Aid

Direct Commands

Version 2.2.1

September 2024

ADABAS & NATURAL

This document applies to System Maintenance Aid Version 2.2.1 and all subsequent releases.

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

Document ID: SMA-DIRECTCMD-221-20240927

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1 About this Documentation

Document Conventions

Convention	Description
Bold	Identifies elements on a screen.
`Monospace font`	Identifies service names and locations in the format *`folder.subfolder.service`*, APIs, Java classes, methods, properties.
`Italic`	Identifies: Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
`Monospace font`	Identifies: Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
|	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the | symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.

2 Direct Commands

This section describes the direct commands provided by SMA.

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.

Command	Description
ADD	Add a data set or a new product definition
CLONE	Clone an existing environment
COPY	Copy an existing environment or generated jobs
DELETE	Delete the table entry of a data set or generated jobs
GENERATE	Start JCL generation
INSTALL	Mark products for installation
LOAD	Load SMA table data
MARK	Mark data sets as to be copied
MODIFY	Set new values for parameters
NATURAL	Execute a Natural command
RENAME	Rename an existing environment
REPORT	Create reports
SET	Set parameters and values for subsequent processing
UNLOAD	Unload jobs, parameters or skeletons

Entering Direct Commands

Note: SMA internally uses the OS/MVS notation to designate the operating system and default environment. This notation directly correspond to the operating system z/OS.

In online dialog mode, direct commands can be entered in the command line at the bottom of each screen. Maximum length is 60 bytes.

In batch mode, direct commands can be provided as input for the program MENU. The maximum length is 80 bytes. To continue over several command lines, use the continuation character *(%)* which will be replaced by a blank before execution.

The following input in the command line is always valid:

- a period (.) has the same effect as PF3, that is, control is returned to the previous menu
- a two-digit number from 01 to 12 has the same effect as the corresponding PF key

Command Syntax

The commands have the following syntax:

```
function  <object-type>  <object>  ↩
```

Not all functions are implemented for all object types. See the description of each command for the valid command combinations.

Commands for Dialog Control

The following commands can be used to access a menu function directly without having to return to the main menu first.

Command	Menu Invoked
A	SMA Administration Menu
A IUPD	SMA Administration Menu - Unused Solutions
A LIB-group	SMA Administration Menu - Unused Library Groups
A PARAM	SMA Administration Menu - Global Parameters
A PRODuct	SMA Administration Menu - Unused Products
A PROFile	SMA Administration Menu - SMA Profile
A SAVED	SMA Administration Menu - Saved Jobs
A TABLoad	SMA Administration Menu - Tabload Job
A TAPE	SMA Administration Menu - Unused Tapes
E	Environment Maintenance Menu
E <*name*>	Environment Maintenance Menu - only the specified environment is displayed
R	Reports Menu
T	Datasets on Tapes Menu
T PROD	Datasets on Tapes Menu - Product Selection List
T VOL	Datasets on Tapes Menu - Tape Selection List
Z	Library Corrections Menu

Using Direct Commands in Batch Mode

Executing SMA in batch mode may be required when product installation media or work files are used, or when large reports are printed.

All SMA direct commands are also valid in batch mode. The most important commands for working with SMA in batch mode are `MODIFY PARAMETER`, `INSTALL` and `GENERATE`.

The JCL Generator stores the generated JCL in the SMA system file. When SMA is used in batch mode, the same JCL is also written to Natural Workfile 2 so that it can be stored within an operating system file.

Executing SMA in Batch Mode

Start a batch-mode Natural session with the following CMSYNIN input:

```
LOGON SYSSMA1
MENU
<command> <command-value ... >
...         possible further commands  ...
FIN
```

Each command and its corresponding values must be contained on one line. Commands and/or command values must be separated by a blank or a comma.

The `GENERATE` command must always be the last command.

Example

The following example shows a command sequence for installing products ADA743 and AOS743 from an installation medium.

Input to batch-mode Natural CMSYNIN:

```
LOGON SYSSMA1
MENU  (see note 1)
LOAD  (see note 2)
SET ENV OS/MVS  (see note 3)
MODIFY PARAMETER LIB-GROUP SAGLIB
MODIFY PARAMETER LIB-GROUP-UNIT 3390
MODIFY PARAMETER LIB-GROUP-VOL SAGDSK
SET-INSTALLED OS/MVS
COPY ENVIRONMENT OS/MVS SAGTEST Test Application Program  (see note 4)
INSTALL ADA743  (see note 5)
INSTALL AOS743
MODIFY PARAMETER SVC 249
MODIFY PARAMETER DBID 25
DELETE JOBS  (see note 6)
GENERATE  (see note 7)
FIN
```

Notes:

1. The SMA batch-mode command processor is invoked.

2. Load control information into SMA. This command requires that Natural Workfile 1 be assigned to the first data set on an installation medium.
3. The `LIB-GROUP` parameters are set to local requirements in the default environment, and these parameter changes are committed immediately.
4. The default environment OS/MVS is copied to the new customer environment named SAGTEST. This new environment will be the environment used for all subsequent commands.
5. Products ADA743 and AOS743 are marked as *to be installed*, and the environment parameters SVC and DBID are set to 249 and 25 respectively.
6. All stored jobs of previous executions are deleted.
7. JCL Generator is invoked.

3 SMA Direct Commands

This section contains the syntax and description for each SMA direct command.

ADD: Add Data Set

```
ADD DATASET <symbolic-dataset-name> <library-group-name> <op-sys>
```

This command adds the specified data set to the specified library group for the specified operating system. The data set cannot already be contained in the specified library group.

The valid value for *op-sys* is OS/MVS.

Example: ADD DATASET ADA744.LX01 SAGLIB OS/MVS

ADD: Add Product Definition

```
ADD PRoduct <product> <op-sys> <product-long-name>
```

This command adds a new product definition.

<*product*> must be six characters long. In order to avoid conflicts with Software AG's product short names (three letters followed by three numeric digits), a different naming convention should be used.

The valid value for *op-sys* is OS/MVS.

This command may be useful for documentation purposes when a product which is not supported by SMA is installed in an environment.

Note: SMA cannot generate JCL for the installation of a product defined by this command.

Example: ADD PRODUCT MYPROD VSE/SP MY-PRODUCT-NAME

CLONE: Clone Environment

```
CLOne ENV <old-environment-name> <new-environment-name> <text>
```

This command clones an existing environment. The *text* will be used as the first line of explanatory text for the new environment. The new environment becomes the current environment for subsequent commands.

Example: CLONE ENV TEST1 TEST3 TEST3-ENVIRONMENT

COPY: Copy Environment or Correction (Zap)

```
COPY ENV <old-environment-name> <new-environment-name> <text>
```

This command copies an existing environment. The *text* will be used as the first line of explanatory text for the new environment. The new environment becomes the current environment for subsequent commands.

Example: COPY ENV TEST1 TEST4 TEST4-COPY

```
COPY ZAP <old-correction-number> <new-correction-number><op-sys> ↩
<new-symbolic-dataset-name><modify y/n>
```

This command copies an existing correction. If "y" is specified for the last parameter, all occurrences of the old correction number are replaced by the new correction number in the correction text.

Example: COPY ZAP AI743011 AX743011 MVS/OS ADA743.LX01 Y

COPY: Copy Generated Jobs

```
COPY JOBS <environment-name> [<to-group-name> [<job-prefix>]]
```

This command copies generated jobs into the Saved Jobs area.

If *to-group-name* is not specified, the *environment-name* is used by default. If both *environment-name* and *to-group-name* are specified, a maximum of four characters can be used for *job-prefix* as prefix for the job names.

Example: COPY JOBS PROD1 PROD1S PRD1

DEL: Delete Data Set

```
DEL DATASET <symbolic-dataset-name> <library-group-name> <op-sys>
```

This command deletes the table entry describing the copy of a data set (library).

The valid value for *op-sys* is OS/MVS.

Note: This command does not delete the data set itself. Only SMA's table entry for this data set is deleted.

Note: The record pointing to the Software AG default library group cannot be deleted.

Example: DEL DATASET SAGLIB.LOAD OS/MVS

DELETE: Delete Generated Jobs

```
DElete JOBS <environment>
```

This command deletes all generated jobs stored in the specified environment.

Before generating JCL, the JCL Generator checks that no generated jobs are stored for this environment. This check ensures a meaningful order of JCL generation and execution.

You can circumvent this check by deleting all jobs stored in the specified environment using this command.

Example: DELETE JOBS PROD1

GENERATE: Start JCL Generation

```
GENERATE  [<environment>]
```

This command starts JCL generation for the selected environment. If <*environment*> is omitted, the environment specified with the last `SET ENV` command will be taken.

The generated JCL lines will be written to the SMA system file, and for batch mode to Natural Workfile 2. The JCL lines on Natural Workfile 2 contain additional lines at the beginning of each job, enabling the separation of the sequential file into a source library. In z/OS, this separation is done by the standard IEBUPDTE utility program.

Example: GENERATE PROD2

```
GENerate  [<TAPE>]
```

The command `GEN TAPE` starts JCL generation for copying marked data sets from the installation medium to disk. Copy steps are generated for the tape specified or for all tapes if <*tape*> has been omitted.

Example: GENERATE T76411

```
GENerate ZAPS FOR <environment>
```

The command GEN ZAPS FOR starts JCL generation for applying Zaps marked in the specified environment.

Example: GENERATE ZAPS FOR ENV1

```
GENerate ZAPS <lib-group>
```

The command `GEN ZAPS` starts JCL generation for applying Zaps for the specified library group.

Example: GENERATE ZAPS LIBGR1

INSTALL: Mark Products for Installation

```
INstall <product> [<environment>]
```

This command marks the specified product as *to be installed*. Installation JCL for this product will be generated during the next JCL generation.

product is specified using six characters, including the version number (for example, NAT414).

If *<environment>* is omitted, the environment specified with the last `SET ENV` command will be taken.

Example: INSTALL ADA744 PROD1

LOAD: Load SMA Table Data

```
LOAD
```

This command loads SMA table data from Natural Workfile 1 into the SMA system file.

MARK: Mark Data Sets on Installation Tape as To Be Copied

```
MARK TO-Be-copied <tape>
```

This command marks data sets contained on the Software AG installation tape as *to be copied*, where appropriate.

For example, for operating system VSE/SP, only the product sublibraries will be marked as *to be copied*; other data sets should be used directly from the installation tape.

MODIFY: Modify Environment Parameter

```
MOdify PARameter [<environment>] <parameter-name> <value>
```

This command sets the new value for the specified parameter. If *<environment>* is omitted, the environment specified with the last `SET ENV` command will be taken.

Example: MODIFY PARAMETER PROD1 ADA-INSTAL-RAI Y

MODIFY: Modify Global Parameter

```
MOdify PARameter GLOBAL-PARMS <parameter-name> <value>
```

This command modifies the value of a global parameter (see Global Parameters for more information).

Example: MODIFY PARAMETER GLOBAL-PARMS MVS-SVC 248

```
MOdify GLOBAL <parameter-name> <value>
```

This command modifies the value of the SMA profile parameters PRINT-SIZE and PRINT-ID.

The meaning of these parameters is the same as documented for the `SET` **command.** In contrast to the `SET` command, which sets the values for the current session only, the values specified with the `MODIFY GLOBAL` command are stored permanently.

Example: MODIFY GLOBAL PRINT-SIZE 55

NATURAL: Execute Natural Command

```
Natural <text>
```

This command passes the specified text directly to Natural for interpretation as a Natural direct command.

Example: NATURAL LIST NATOBJ1

The following Natural commands can be issued directly from SMA without issuing a NATURAL <text> command:

- SYS... each command starting with SYS
- EDIT

- EX or EXECUTE
- FIN
- GLOBALS
- LOGON

RENAME: Rename Environment

```
REName ENV <old-environment-name> <new-environment-name> <text>
```

This command renames an existing environment. The *text* will be used as the first line of explanatory text for the new environment. The new environment becomes the current environment for subsequent commands.

Example: RENAME TDEV TDEV1 TDEV1-DESCRIPTION

REPORT: Print Report

Note: The reports produced by the REP commands will be displayed online unless the REP command was issued in batch mode, in which case the report will be output to printer 1.

```
REPort ENVironment  [<environment>]
```

This command prints a report of the selected environment. The environment description, list of installed products, and parameter settings are printed.

If <*environment*> is omitted, the environment specified with the last `SET ENV` command will be taken.

Example: REPORT ENV PROD1

```
REPort TApe  <tape-volume-serial-number>
```

This command prints detailed information on tapes, tape description texts and data sets on tape.

If <*tape-volume-serial-number*> contains an asterisk, all tapes which begin with the value specified will be selected.

Example: REPORT TAPE T76411

Example: REPORT TAPE T76*

```
REPort DAtasets <product>
```

This command prints a report of all data sets known to SMA, sorted by product name.

If <*product*> contains an asterisk, all products which begin with the value specified will be selected.

Example: REPORT DATASETS ADA834

Example: REPORT DATASETS ADA*

```
REPort PARM <environment> [<parameter-group>]
```

This command prints a report of all available parameters, their explanations and their current values in the specified environment. This report should be used when preparing to install Software AG products with SMA.

The specification of the parameter group is optional. If specified, only the parameters of the specified group will be shown.

Example: REPORT PARM PROD1

```
REPort VALue<parameter> <parameter-group>
```

This command prints a report of the values of all parameters contained in the specified group.

Example: REPORT VALUE BASIC

```
REPort JCL <skeleton-name>
```

This command prints a report of a JCL skeleton, and lists the parameters occurring in this skeleton.

Example: REPORT JCL ADA-FILES

When used in batch mode, the command `SET ENVIRONMENT` must be entered first, for example:

```
LOGON SMA1
  MENU
  SET ENVIRONMENT OS/MVS
  REPORT JCL ADA-FILES
```

```
REPort ZAP-APPLIED  [<from> <to>]  [<op-sys>]
```

This command provides an overview of the Zaps applied, sorted by Zap number, including the information where, when and by whom the Zaps were applied.

The Zap range must be specified using <*from*> and <*to*>.

The valid value for *op-sys* is OS/MVS.

Example: REPORT ZAP-APPLIED * * OS/MVS

Example: REPORT ZAP-APPLIED AI743001 AI743999 OS/MVS

SET: Set Parameters and Values for Subsequent Processing

```
SET ENVironment <environment-name>
```

This command selects the environment in which subsequent commands will operate. If the specified environment does not exist, an error message will be displayed.

Example: SET ENV PROD1

```
SET PRINT-SIZE <number-of-lines>
```

This command defines the page size for reports.

Example: SET PRINT-SIZE 50

```
SET LANG <language-code 1 or 2>
```

This command sets the language code for the SMA dialog (1 = English, 2 = German).

Example: SET LANG 2

```
SET PRINT-ID <print-id>
```

This command sets the printer ID for reports and print functions.

Example: SET PRINT-ID PRINT01

```
SET LOAD VOLser <VOLser>
```

This command changes the volume serial number of specified tape in the SMA table data.

This command influences all subsequent `LOAD` command operations during this run. The original volume serial name for the installation tape will be replaced in the SMA table data with the new name. This may be necessary if the Software AG installation tape has to be copied to a new tape because of local data center conventions.

Example: SET LOAD T76411 MYTP11

SET: Set Status

```
SET-APPLIED <environment> ↩
```

This command changes the status from *to be applied* to *applied*, and from *to be undone* to *undone* for all Zaps marked in the named environment.

Example: SET-APPLIED ENV1

```
SET-APPLIED LIB-GROUP <library-group>
```

This command changes the status from *to be applied* to *applied,* and from *to be undone* to *undone* for all Zaps in the named library group.

Example: SET-APPLIED LIB-GROUP LIBGRP1

```
SET-COPIED ↩
```

This command resets the status *to be copied* for a data set.

Example: SET-COPIED

```
SET-COPIED TAPE <tape>
```

This command resets the status *to be copied* for the data sets of the tape specified.

Example: SET-COPIED TAPE T76411

```
SET-COPIED LIB-GROUP <library-group>
```

This command resets the status *to be copied* for the data sets of the library group specified.

Example: SET-COPIED LIB-GROUP LIBGR1

```
SET-INSTALLED <environment>
```

This command changes the status of products from *to be installed* to *installed* and the status of new parameter values to *installed* values.

This command is executed by the last generated job in an installation sequence. It can also be called directly to document the status of the parameters and installed products in an existing environment.

Example: SET-INSTALLED ENV1

```
SET TO-BE-COPIED <symbolic-dataset-name> <library-group-name> <op-sys>
```

This command sets the status *to be copied* for the data set specified.

The valid value for *op-sys* is OS/MVS.

Example: SET TO-BE-COPIED SAGLIB.ADA744.LOAD LIBGP1 OS/MVS

UNLOAD: Jobs

```
UNLOAD JOBS <environment>
```

This command writes all generated jobs stored for the environment to Natural Workfile 2. In addition, the output will contain control records for the corresponding library utility (IEBUPDTE, LIBR).

Example: UNLOAD JOBS PROD1

```
UNLOAD TABS-JOBS <environment-name > [AS <new-env-name>]
```

This command writes all generated jobs stored for the environment to Natural Workfile 2. In addition, the output will contain SMA control statements so that the output can be loaded into this SMA file or a different one.

AS <new-env-name> may be used to provide a new environment name for the unloaded output.

Example: UNLOAD TABS-JOBS PROD1 AS PROD1UN

```
UNLOAD SAVED <Group-Name>
```

This command writes all saved jobs stored in the specified job group to Natural Workfile 2. In addition, the output will contain control records for the corresponding library utility (IEBUPDTE, LIBR).

Example: UNLOAD SAVED GRP1

```
UNLOAD TABS-SAVED <group-name > [AS <new-grp-name>]
```

This command writes all saved jobs stored in the specified job group to Natural Workfile 2. In addition, the output will contain SMA control statements so that the output can be loaded into this SMA file or a different one.

AS <new-env-name> may be used to provide a new group name for the unloaded output.

Example: UNLOAD TABS-SAVED GRP1

UNLOAD: JCL Skeletons and Parameters

```
UNLOAD TABS-JCL <environment-name*> <JCL-skeleton-name*>
```

This command unloads JCL skeletons from the default environment as well as from the user environments (an asterisk notation is possible) to Natural Workfile 2. In addition, the output will contain SMA control statements so that it can be loaded into this SMA file or a different one.

Example: UNLOAD TABS-JCL PROD1 ADA-FILES

```
UNLOAD TABS-PRPARM  <op-sys> <Symbolic-Parameter-name*>
```

This command unloads parameter descriptions to Natural Workfile 2. If an asterisk is used for *parameter-name*, all parameters will be unloaded. In addition, the output will contain SMA control statements so that it can be loaded into this SMA file or a different one.

The valid value for *op-sys* is OS/MVS.

Example: UNLOAD TABS-PRPARM OS/MVS *

```
UNLOAD TABS-PPVALUE  <environment-name*> <Symbolic-Parameter-name*>
```

This command unloads parameter values from the default environment as well as from the user environments to Natural Workfile 2. If an asterisk is used for *parameter-name*, all parameters will be unloaded. In addition, the output will contain SMA control statements so that it can be loaded into this SMA file or a different one, provided that the corresponding parameter description has already been loaded.

Example: UNLOAD TABS-PPVALUE PROD1 *

UNLOAD: Zaps

```
UNLOAD ZAP NAMED <zap-number> <op-sys>
```

This command writes the specified Zaps to Natural Workfile 2. In addition, the output will contain control records for the corresponding library utility (IEBUPDTE, LIBR).

If <*zap-number*> contains an asterisk, those Zaps beginning with the specified value will be written.

The valid value for *op-sys* is OS/MVS.

Example: UNLOAD ZAP NAMED AI* OS/MVS

```
UNLOAD TABS-ZAP NAMED <zap-name> <op-sys>
```

This command writes the specified Zaps to Natural Workfile 2. In addition, the output will contain SMA control statements so that it can be loaded into this SMA file or into a different one.

If <*zap-number*> contains an asterisk, those Zaps beginning with the specified value will be written. Control records for the corresponding library utility (IEBUPDTE, LIBR) are also written.

The valid value for *op-sys* is OS/MVS.

Example: UNLOAD TABS-ZAP NAMED AI* OS/MVS

```
UNLOAD ZAP FOR <symbolic-dataset-name> <op-sys>
```

This command writes the Zaps belonging to the specified data set to Natural Workfile 2. In addition, the output will contain control records for the corresponding library utility (IEBUPDTE, LIBR).

The valid value for *op-sys* is OS/MVS.

Example: UNLOAD ZAP FOR ADA744.LOAD OS/MVS

```
UNLOAD TABS-ZAP FOR <symbolic-dataset-name> <op-sys>
```

This command writes the Zaps belonging to the specified data set to Natural Workfile 2. In addition, the output will contain SMA control statements so that it can be loaded into this SMA file or into a different one.

The valid value for *op-sys* is OS/MVS.

Example: UNLOAD TABS-ZAP FOR ADA744.LOAD OS/MVS