

# ***IBM Application Performance Analyzer Automation Assistant for z/OS***

*Installation Guide*

*Version 1 Release 2*

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## Related documentation

- IBM Application Performance Analyzer Automation Assistant for z/OS Message Guide (SC23-8546-00)
- IBM Application Performance Analyzer Automation Assistant for z/OS User Guide (SC23-8547-00)

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# About this document

IBM Application Performance Analyzer Automation Assistant for z/OS is an automated performance management solution for use with IBM Application Performance Analyzer 1.1 or higher. IBM Application Performance Analyzer Automation Assistant for z/OS, hereafter referred to as **APA Automation Assistant**, interfaces seamless with IBM Application Performance Analyzer to automate the process of measuring applications, prioritizing your tuning efforts and filtering large volumes of data for quick identification of tuning opportunities.

This manual explains step-by-step the post installation and customization tasks of Application Performance Analyzer Automation Assistant and its optional components.

## Who might use this document

This document is intended for system programmers and system administrators who plan for, customize and maintain APA Automation Assistant. To use this document, you need to be familiar with the z/OS operating system, the publications that describe your system, and job control language (JCL) and REXX exec processing.

## Other documentation that you might need

For the installation of APA Automation Assistan you will need to refer to the *IBM Application Performance Analyzer Automation Assistant for z/OS Program Directory*. For information about how to use the product, see the publication *IBM Application Performance Analyzer Automation Assistant for z/OS User Guide*. For details about messages, see the publication *IBM Application Performance Analyzer Automation Assistant for z/OS Message Guide*.

## IBM product names

The following IBM® products are referenced in this manual:

- IBM CICS®
- IBM DB2®
- IBM IMS
- IBM Language Environment®
- IBM WebSphereMQ®
- IBM z/OS®

## Conventions

The following typographic conventions are used:

<i>boldface</i>	Indicates a command or keyword that you should type, exactly as shown.
<i>italics</i>	Indicates a variable for which you should substitute an appropriate value.
<i>monotype</i>	Indicates literal input and output.

## Some basic concepts and terminology

### Sampling

Application Performance Analyzer Automation Assistant triggers IBM Application Performance Analyzer for sampling. Please see more detailed information in IBM Application Performance Analyzer User Guide.

### The Application Performance Analyzer Automation Assistant Product Code

The module name prefix (product code) used by Application Performance Analyzer Automation Assistant is AOZ.

### The ISPF Interface

The Application Performance Analyzer Automation Assistant ISPF interface provides the user with full, interactive access to the product's functionality. A single, gateway dialogue serves as the entry point to all interactive services. The interactive services fall into three basic categories: Interface to IBM Application Performance Analyzer, Watchlist Results & History, Customizing.

### Batch processing

The batch processing of Application Performance Analyzer Automation Assistant performs data extraction and data maintenance. Log and account data will be analysed, extracted and cumulated. Finally the data will be stored into the Application Performance Analyzer Automation Assistant DB2 Performance Data Warehouse.

## New features in this release

### Application Performance Analyzer Automation Assistant 1.2

This release includes the following new features:

#### Integration of IBM Application Performance Analyzer reports

IBM APA measurement results will be analysed and stored into the APA Automation Assistant DB2 Performance Data Warehouse, hereafter referred to as **DB2 PDWH**. These measurement results can be viewed independent of the IBM Application Performance Analyzer started task. Additional control information for performance history needs will be created and stored.

### **New filter criteria and ratios in the z/OS watchlist**

- CPU service units
- IO service units
- Memory service units
- CPU service units/second
- IO service units/second

### **Email support**

Application Performance Analyzer Automation Assistant can activate IBM APA requests based on the watchlist results. If requested, the product will send an email with a list of activated requests to the specified email address. This email address can be specified on watchlist level.

### **Automatic reorganisation of APA Automation Assistant DB2 Performance Data Warehouse**

Application Performance Analyzer Automation Assistant will reorganize the DB2 PDWH and discard watchlist data based on the 'Keep History'. The 'Keep History' option can be set on watchlist level.

### **Multiple selection on the ISPF watchlist panels**

Application Performance Analyzer Automation Assistant supports that multiple watchlist elements can be selected. The selected elements will be shown in sequence.

### **New z/OS watchlist fields:**

- Storage used above and below the 16 MB line
- Job class and performance group
- List of the ten DD statements with the most I/O activity

### **New CICS watchlist fields:**

- Average file request per transaction
- Average CPU consumption per transaction
- Average response time per transaction

### **Mark fields that caused the watchlist selection**

Fields that caused the selection will be marked 'yellow' on the ISPF watchlist panels.



## Migrating from APA Automation Assistant 1.1 to 1.2

The layout of the options file will change in 1.2. It is necessary to run the conversion utility AOZCONV0 to change a 1.1 options file to 1.2. The conversion utility will upgrade the options file in place.

**Caution: A migrated options file should not be accessed by the previous release. APA Automation Assistant 1.1 would downgrade the work of the conversion utility. The result is unpredictable.**



**CHAPTER 1**

# Customizing APA Automation Assistant

This section presents a step-by-step description of the Application Performance Analyzer Automation Assistant post installation process. The major stages in this process are:

- 'Software requirements' on page 12
- 'Supported systems' on page 12
- 'Performing the customization procedure' on page 14
- 'Verifying the installation' on page 19

## Software requirements

The Application Performance Analyzer Automation Assistant ISPF application and batch jobs will run on any one of the following IBM operating systems:

- OS/390 all versions
- z/OS all versions

The batch processing component of Application Performance Analyzer Automation Assistant runs under all version of JES.

The ISPF component of Application Performance Analyzer Automation Assistant requires:

- TSO/E Version 2 or higher and
- ISPF and ISPF/PDF Version 3.3 or higher

The REXX modules of Application Performance Analyzer Automation Assistant needs:

- Library for REXX Version 3 or higher or
- REXX Alternate Library

The Application Performance Analyzer Automation Assistant DB2 Performance Data Warehouse requires:

- DB2 Version 7 or higher

## Supported systems

Application Performance Analyzer Automation Assistant supports following systems and subsystems:

- OS/390 all versions
- z/OS all versions
- CICS Version 6.1 or higher
- DB2 Version 7 or higher
- IMS Version 7 or higher
- MQSeries Version 5.2 or higher

## Space requirements

The following table documents the space requirements of Application Performance Analyzer Automation Assistant DB2 Performance Data Warehouse:

Table Name	Description	Average row Length compressed	Number of rows /day example	Space in Bytes/Day plus 34% DB2 overhead
APM.ACM	CICS Application Information	205	50	13.735
APM.ACX	CICS Abend Information	153	10	2.050
APM.A2M	DB2 Application Information	147	50	9.849
APM.A2X	DB2 Abend Information	103	10	1.380
APM.APM	IMS Transaction Information	148	50	9.916
APM.APB	IMS BMP Information	163	25	5.461
APM.APX	IMS Abend Information	185	10	2.479
APM.IMSEXC	IMS Transaction Exception Information	129	250	43.215
APM.PRD	IMS Preload List	87	150	17.487
APM.AQM	MQSeries Application Information	155	50	10.385
APM.AQX	MQSeries Abend Information	136	1	182
APM.AZM	z/OS Jobs Information	159	50	10.653
APM.AZX	z/OS Jobs Abend Information	188	20	5.038
APM.MOD	Changed Load Module Information	115	20	3.082
APM.HIS	History Information of Extractor runs	65	30	2.613
APM.REQ	IBM APA Reports	40	240.000	12.864.000
APM.SRQ	IBM APA Reports Control Information	514	12	8.265

Total Space in Megabytes per Day: **13,01 MB**

Total Space in Gigabytes for one year using option "Keep History with 180 days": **2,34 GB**

**Note** This table applies only if the information of all subsystems like z/OS, IMS, DB2, MQS, CICS, etc. are processed and all options of Application Performance Analyzer Automation Assistant are activated.

## Performing the customization procedure

If you need to install APA Automation Assistant, refer to the *IBM Application Performance Analyzer Automation Assistant Program Directory* for installation instructions.

**Note:** Please make sure that the load library *hlq.V1R2.SAOZLINK* is placed in the LNKLST or the modules of this library are placed in a LNKLST-dataset. For example: the CAZLINK load library of IBM Application Performance Analyzer may be an option to copy the authorized modules of APA Automation Assistant.

Once you have installed APA Automation Assistant you are prepared to carry out the customization procedure. Please follow all steps as described in the next sections.

- 1 Select ISPF option "6" and type the command:

```
EXEC 'hlq.V1R2.SAOZINST(AOZINST)'
```

The first customization panel appears.

```
AOZIP006 ----- APA Automation Assistant 1.2.01 -----
                Installation Panel - Installation/Maintenance
COMMAND =====> _____

If this is a new installation of APA AA press the ENTER key to continue.

If you are running a previous release of APA AA enter following information:
Dsname of APA AA VSAM options file : _____

Press the ENTER key to continue, or the END key to exit
```

If you are an existing customer with APA Automation Assistant 1.1 installed please enter the dataset name of your existing APA Automation Assistant VSAM options file. The data of your existing APA Automation Assistant VSAM options file will be converted to the new APA Automation Assistant 1.2 VSAM options file format during the maintenance installation process.

Before running the conversion utility AOZCONV0 do a backup copy of the old options file.

Press the 'ENTER' key and the next customization panel appears.

```

AOZIP001 ----- APA Automation Assistant 1.2.01 -----
                Installation Panel - General information settings
COMMAND ==> _____

Please enter following information according to your installation standards:

General information for APA AA and IBM APA

High level qualifier for APA AA      : AOZ.V1R2_____
High level qualifier of IBM APA     : CAZ.V8R1_____
Instance ID of IBM APA              : CAZO

Allocation information for APA AA datasets

DASD unit name for temp datasets    : SYSALLDA
VOL=SER for VSAM options dataset    : TS0002          (required for Non-SMS)
VOL=SER for NONVSAM datasets        : WORK01          (required for Non-SMS)

Press the ENTER key to continue, or the END key to exit

```

On this panel, please specify:

- **Required.** The high level qualifier used and you want to use for the naming of the Application Performance Analyzer Automation Assistant data sets.
- **Required.** The high level qualifier used for the IBM Application Performance Analyzer data sets. You might contact the person who is responsible for the installation of IBM Application Performance Analyzer.
- **Required.** The Instance ID of the IBM Application Performance Analyzer started task. You might contact the person who is responsible for the installation of IBM Application Performance Analyzer.
- **Required.** A DASD unit name. The unit name will be used by the installation job later for allocating temporary data sets.
- **Optional.** Volume serial of the volume where the Application Performance Analyzer Automation Assistant VSAM option file will be allocated. Please contact your storage administrator to get the correct volume serial if SMS is not active.
- **Optional.** Volume serial of the volume where the Application Performance Analyzer Automation Assistant NONVSAM datasets will be allocated. Please contact your storage administrator to get the correct volume serial if SMS is not active.

Press the 'ENTER' key and the next customization panel appears.

```

AOZIP011 ----- APA Automation Assistant 1.2.01 -----
                Installation Panel - Subsystem Information
COMMAND ==>> _____

Please enter following information according to your installation standards:

Allocation information for APA AA DB2 objects

DB2 Version           : 81             (enter 71, 81 or 91)
DB2 SSID              : DSN1
DB2 storage group     : SYSDEFLT
DB2 buffer pool       : BP0_
Name of database      : AOZPLUS_

Dsname of DB2 load    : DSN810.SDSNLOAD_____
Dsname of DB2 runtime library : DSN810.RUNLIB.LOAD_____
DB2 Image copy template : KW.AOZV7R1.&TS..IC(+1)_____

Alias for APA AA tables : _____

Press the ENTER key to continue, or the END key to return to previous panel

```

On this panel, please specify the information related to the Application Performance Analyzer Automation Assistant DB2 Performance Data Warehouse. Your DB2 database administrator may support you to provide the correct values of the:

- **Required.** Version number of the DB2 subsystem that should manage the Application Performance Analyzer Automation Assistant DB2 Performance Data Warehouse.
- **Required.** DB2 subsystem name. All performance data is stored into this DB2.
- **Optional.** DB2 storage group name for storing the database. If not entered the default SYSDEFLT will be used.
- **Optional.** DB2 buffer pool name for accessing the database. If not entered the default BP0 will be used.
- **Optional.** Name of the Application Performance Analyzer Automation Assistant database. If not entered the default AOZPLUS will be used.
- **Required.** Name of the DB2 load library.
- **Required.** Name of the DB2 run time library.
- **Optional.** Template of DB2 image copies. The template will be used as high level qualifier for the database image copy data sets. If not entered the default AOZ.V1R2 will be used.
- **Optional.** Alias for APA Automation Assistant DB2 Table. You may enter a DB2 Alias to suit your installation standards and naming conventions. Please see the APA Automation Assistant DB2 table names as described in the chapter Space Requirements.

Press the 'ENTER' key and the next customization panel appears.



:

```

AOZIP002 ----- APA Automation Assistant 1.2.01 -----
                          Installation Panel
COMMAND ==> _____

Please verify dsnames for APA AA

LOAD dsname       : AOZ.V1R2.SAOZLOAD_____
LINK dsname       : AOZ.V1R2.SAOZLINK_____
EXEC dsname       : AOZ.V1R2.SAOZEXEC_____
SAMP dsname       : AOZ.V1R2.SAOZSAMP_____
ISPMLIB dsname    : AOZ.V1R2.SAOZMLIB_____
ISPPLIB dsname    : AOZ.V1R2.SAOZPLIB_____
VSAM options dsname : AOZ.V1R2.OPTIONS_____
PDSE report dsname : AOZ.V1R2.EXTPDS_____

Press the ENTER key to continue, or the END key to return to previous panel

```

On this panel, please verify the names of the Application Performance Analyzer Automation Assistant data sets. If the data set names are correct press the 'ENTER' key and the next customization panel appears.

```

AOZIP004 ----- APA Automation Assistant 1.2.01 -----
                          Installation Panel
COMMAND ==> _____

Please verify dsnames for IBM APA

AUTH dsname       : CAZ.V8R1.SCAZAUTH_____
LINK dsname       : CAZ.V8R1.SCAZLINK_____
EXEC dsname       : CAZ.V8R1.SCAZEXEC_____
SAMP dsname       : CAZ.V8R1.SCAZSAMP_____
MENU dsname       : CAZ.V8R1.SCAZMENU_____
PENU dsname       : CAZ.V8R1.SCAZPENU_____
TENU dsname       : CAZ.V8R1.SCAZTENU_____
CHKPT dsname      : CAZ.V8R1.CHKPT_____

System information for IBM APA

PROCLIB dataset for STC's : SYS1.PROCLIB_____

Press the ENTER key to continue, or the END key to return to previous panel

```

On this panel, please specify the information related to your IBM APA environment.

- **Required.** Verify the names of your existing IBM Application Performance Analyzer data sets. You might contact the person who is responsible for the installation of IBM Application Performance Analyzer.

- **Required.** Enter the dataset name of a PROCLIB for started tasks. Application Performance Analyzer Automation Assistant places here its started task with the member name **AOZ\$CAZO** for processing IBM Application Performance Analyzer measurement results. The best place for this member is probably the same PROCLIB dataset where the JCL of the IBM Application Performance Analyzer started task is stored.

Press the 'ENTER' key and the next customization panel appears.

```
AOZIP003 ----- APA Automation Assistant 1.2.01 -----
                          Installation Panel
COMMAND ==> _____

Please enter or verify the Jobcard information below:
(The Jobcard information will be used to create the batch installation jobs)

Jobcard information:

==> //IBUSERA JOB (BRIEELY),AKB,CLASS=A,MSGCLASS=H,MSGLEVEL=(1,1),_____
==> //          NOTIFY=&SYSUID,REGION=0M_____
==> //*_____
==> //*_____

Press the ENTER key to continue, or the END key to return to previous panel
```

On this panel, please enter a valid jobcard and

press the 'ENTER' key for starting generating the installation batch job and samples.

```
AOZIP000 ----- APA Automation Assistant 1.2.01 -----
                          Installation Panel
COMMAND ==> _____

Please wait a little moment while the batch jobs/samples are generated.

Job/Sample 24 of 65 generated
```

Now all Application Performance Analyzer Automation Assistant installation and sample members will be generated. On completion the JCL of the installation job appears and you might use ISPF EDIT to change the JCL for this job, or

- directly submit the installation job.

Please check job output to ensure that all steps run with condition code = 0.

**Note** When used for first time installation of Application Performance Analyzer Automation Assistant, step DDL1 will terminate with return code = 8 because of a DROP DATABASE that does not exist.

## Verifying the installation

To verify the installation, Application Performance Analyzer Automation Assistant provides an IVP job stream for all Application Performance Analyzer Automation Assistant functions.

The IVP job stream is stored with the member name AOZIVP1 in the *hlq.CNTL* dataset. Submit this job and check job output to ensure that all steps were run with condition code 0 or 4.

You can control the work done by the IVP job by reviewing the output that is assigned to the DD statements SYSPRINT and UTPRINT.

This job also performs a DB2 Image Copy of your APA Automation Assistant DB2 Performance Data Warehouse. Please ensure that the DB2 Image Copy complies with your installation standards.

After successful completion of the IVP job invoke APA Automation Assistant as follows:

- 1 Select **Option 6 (Command)** in the ISPF Primary Option Menu.
- 2 Enter "EXEC 'hlq.SAOZEXEC(AOZEMAIN)'" in the ISPF Command Shell to start Application Performance Analyzer Automation Assistant.
- 3 The Primary Option menu displays

```
AOZPMAIN  Application Performance Analyzer Automation Assistant 1.2.01 -----
                                     Primary Option Menu
COMMAND ==>

      Option Dataset: KW.AOZV7R1.OPTIONS

      Interface to AP Analyzer
      1  AP Analyzer
      2  Archived AP Analyzer Reports

      Watchlist & Threshold Results, History
      3  z/OS
      4  CICS
      5  DB2
      6  IMS
      7  MQSeries

      Miscellaneous
      8  Job Abends, Changed Modules, IMS Preload List,
         Extractor Statistics

      Customize Environments
      9  Administration
      X  Exit
```

- 4 Select **Option 1 (IBM Application Performance Analyzer)** on the Administration Menu and select the \$GLOBAL entry to check if the connection to IBM Application Performance Analyzer will be established.

- 5 Select **Option 3 (z/OS)**, press ENTER on the following selection screen and ENTER „sort CPU-time“. The displayed ISPF table should be sorted by CPU-Time.
- 6 Select any entry of the ISPF table and press ENTER to see if detail data will be displayed.
- 7 Press PF3 and enter the line command **A** for this entry for activate a IBM Application Performance Analyzer request for this job.

## Preparing the z/OS system

### Add Application Performance Analyzer Automation Assistant to an ISPF menu

Application Performance Analyzer Automation Assistant can be accessed online using the TSO command

```
EXEC 'h1q.SAOZEXEC(AOZEMAIN)'
```

on the ISPF Command Shell (Option 6 of ISPF Primary Option Menu).

Optionally, the command can be added to any ISPF Menu panel. The )BODY section of the desired ISPF Menu panel should contain a description of Application Performance Analyzer Automation Assistant. For example:

```
APP Application Performance Analyzer Automation Assistant
- Application Performance Analyzer Automation Assistant V1.2
```

And the execution command

```
APP,'CMD(EXEC ''h1q.SAOZEXEC(AOZEMAIN)'') NEWAPPL(APMP)'
```

has to be placed on the )PROC section of the ISPF Menu panel.

### Customize the z/OS MPF Facility

For automatically storing the IBM Application Performance Analyzer reports into the APA Automation Assistant DB2 Performance Data Warehouse the MPF-Exit AOZMPF01 must be activated in your MPFLSTxx in SYS1.PARMLIB as follows:

```
CAZ0073I, SUP(NO), USEREXIT(AOZMPF01)
```

In addition, the load module AOZMPF01 must be copied from APA Automation Assistant load library *h1q.SAOZLINK* to an existing linklist library.

After the copy the linklist must be refreshed with the console command:

```
'F LLA, REFRESH'
```

The z/OS MPF facility list must be refreshed with the console command:

```
'SET MPF=xx'
```

If your installation is using an automation software package you may use it, instead of using the APA Automation Assistant MPF facility. The automation package has to intercept message CAZ0073I and to schedule a MVS command.

```
S AOZ$ssid, SPRM='nnnnnnnnssidjobname'
```

ssid = IBM Application Performance Analyzer subsystem id. Four characters padded with blanks.

nnnnnnnn = IBM Application Performance Analyzer request number. Eight characters padded with leading zeros.

jobname = jobname of the monitored job. Eight characters padded with blanks.

**Customize STC  
JCL**

Please make sure that the started task JCL of Application Performance Analyzer Automation Assistant, which was stored with the member name AOZ\$CAZ0 in the provided PROCLIB dataset, will be scheduled by Application Performance Analyzer Automation Assistant MPF facility or your automation package. During the installation process a proc AOZ\$\$ssid has been generated. The ssid will reflect the IBM Application Performance Analyzer subsystem id. When your ssid is 'CAZ9' then the proc name will be AOZ\$CAZ9. The default name is AOZ\$CAZ0.

This naming conventions support that more than one IBM Application Performance Analyzer instance can run on the same lpar. By using different proc names the automation can be setup for multiple IBM Application Performance Analyzer instances

JCL of the Application Performance Analyzer Automation Assistant started task AOZ\$CAZ0:

```
//AOZ$CAZ0 PROC SPRM=
//*
//AOZSCAN0 EXEC PGM=AOZSCAN0, PARM='&SPRM'
//STEPLIB DD DISP=SHR, DSN=h1q.SAOZLOAD
// DD DISP=SHR, DSN=CAZ.V8R1.SCAZAUTH
//CHKPT DD DISP=SHR, DSN=CAZ.V8R1.CHKPT
//EXTPDS DD DISP=OLD, DSN=h1q.EXTPDS
//SYSUT2 DD DISP=(,PASS), DSN=&TEMP,
// UNIT=SYSALLDA, SPACE=(CYL,(3,1),RLSE),
// DCB=(RECFM=FB,LRECL=121,BLKSIZE=0)
//CAZCTL DD DISP=SHR, DSN=h1q.SAOZSAMP(AOZSCAN0)
//CAZLOG DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
```

DD Statements:

CHKPT must point to the checkpoint file of this IBM Application Performance Analyzer instance.

EXTPDS must point to the Application Performance Analyzer Automation Assistant EXTPDS.

**Prerequisites of  
APA Automation  
Assistant DB2  
Interface**

Optional. When the DB2 Loadlib is not accessible via Linklst or Steplib, then the command 'AOZDSLIB' must become an authorized TSO command.

Therefore the command name AOZDSLIB has to be added to the section AUTHCMD of the parmlib member IKJT\$SOxx. E.g.:

```
AUTHCMD NAMES( /* AUTHORIZED COMMANDS */ +
...
AOZDSLIB /* Application Performance Analyzer
Automation Assistant (DB2 INTERFACE) */ +
...
```

In addition, the load module AOZDSLIB must be copied from the Application Performance Analyzer Automation Assistant load library *h1q.SAOZLINK* to an existing linklist library. After the copy the linklist must be refreshed with the console command 'F LLA,REFRESH'. Issue a "PARMLIB UPDATE(xx)" on TSO to reflect the IKJTSoxx change.

## REXX Library

Several APA Automation Assistant load modules are compiled REXX procedures. On execution they require the Library for REXX (IBM program number 5695-014) or the REXX Alternate Library.

If the Library for REXX is not installed on your system, please check the availability of the REXX Alternate Library on the system(s) where APA Automation Assistant should be implemented. Therefore, you can use the REXX procedure AOZTEST as provided in the APA Automation Assistant library *h1q.EXEC*.

Enter "EXEC 'h1q.SAOZEXEC(AOZTEST)'" on the ISPF Command Shell (Option 6 of ISPF Primary Option Menu) and the procedure will check the availability of the REXX Alternate Library and tells the result.

If neither the Library for REXX nor the REXX Alternate Library is available on your system(s), please install the REXX Alternate Library. Alternatively you can use the job AOZSGALT from the APA Automation Assistant JCL library *h1q.SAOZSAMP* to create a copy of the REXX Alternate Library. This job stores a free distribution of the REXX Alternate Library using data set name *h1q.AOZSEAGA* on your system.

To make the newly installed REXX Alternate Library available for Application Performance Analyzer Automation Assistant processing, two possibilities are given:

- a Include the library to the linklist concatenation of your system.
- b Add the library to the steplib concatenation of the Application Performance Analyzer Automation Assistant batch jobs and your TSO logon procedure.

## SMF Processing

APA Automation Assistant gathers performance data from several SMF records. From there it is essential, that your SMF processing is activated for SMF record type 30, 101, 110 and 116 on all systems observed by Application Performance Analyzer Automation Assistant.

Please check member SMFPRMxx of *SYS1.PARMLIB*, if these requirements are fulfilled.

## Allocate Additional Options File

Normally it is not necessary to allocate an additional option file. But sometimes a additional option file is needed to have an alternate option set or to create a backup copy.

For allocating an empty option file, please use the following JCL:

```
//DEFINE EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN DD *
  DEL <additional option file>
  SET MAXCC = 0
  DEFINE CLUSTER (NAME(<additional option file>) -
    INDEXED CISZ(4096) -
    KEYS(32 0) RECSZ(100 4089) -
    VOLUMES(<volser>) -
    SHR (2,3) -
    CYL (05,05)) -
    DATA (NAME(<additional option file>.DATA)) -
    INDEX (NAME(<additional option file>.INDEX))
/*
```

and replace *<additional option file>* by the name of the new option file and *<volser>* by the name of the volume, where it should be allocated.

Afterwards, you can copy the contents of your actual option file to the new one using the IDCAMS REPRO function.

Or you can initialize the new option file with default values while using the job AOZINIT from the APA Automation Assistant JCL library *hlq.SAOZSAMP*:

```
//INIT EXEC PGM=AOZEINIT
//STEPLIB DD DISP=SHR,DSN=hlq.SAOZLOAD
//SYSPROC DD DISP=SHR,DSN=hlq.SAOZINST
//OPTIONS DD DISP=SHR,DSN=<additional option file>
//SYSPRINT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
```



## Migrating from APA Automation Assistant 1.1 to 1.2

The layout of the options file will change in 1.2. It is necessary to run the conversion utility AOZCONV0 to change a 1.1 options file to 1.2. The conversion utility will upgrade the options file in place.

**Caution: A migrated options file should not be accessed by the previous release. APA Automation Assistant 1.1 would downgrade the work of the conversion utility. The result is unpredictable.**

```
//AOZCONV EXEC PGM=AOZCONVO  
//STEPLIB DD DISP=SHR,DSN=h1q.SAOZLOAD  
//OPTIONS DD DISP=SHR,DSN=h1q.OPTIONS  
//SYSPRINT DD SYSOUT=*  
//SYSUDUMP DD SYSOUT=*
```

Run this utility for every 1.1 options file that should be used with APA Automation Assistant 1.2. It is recommended to do a backup of the options file before running the conversion utility.



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