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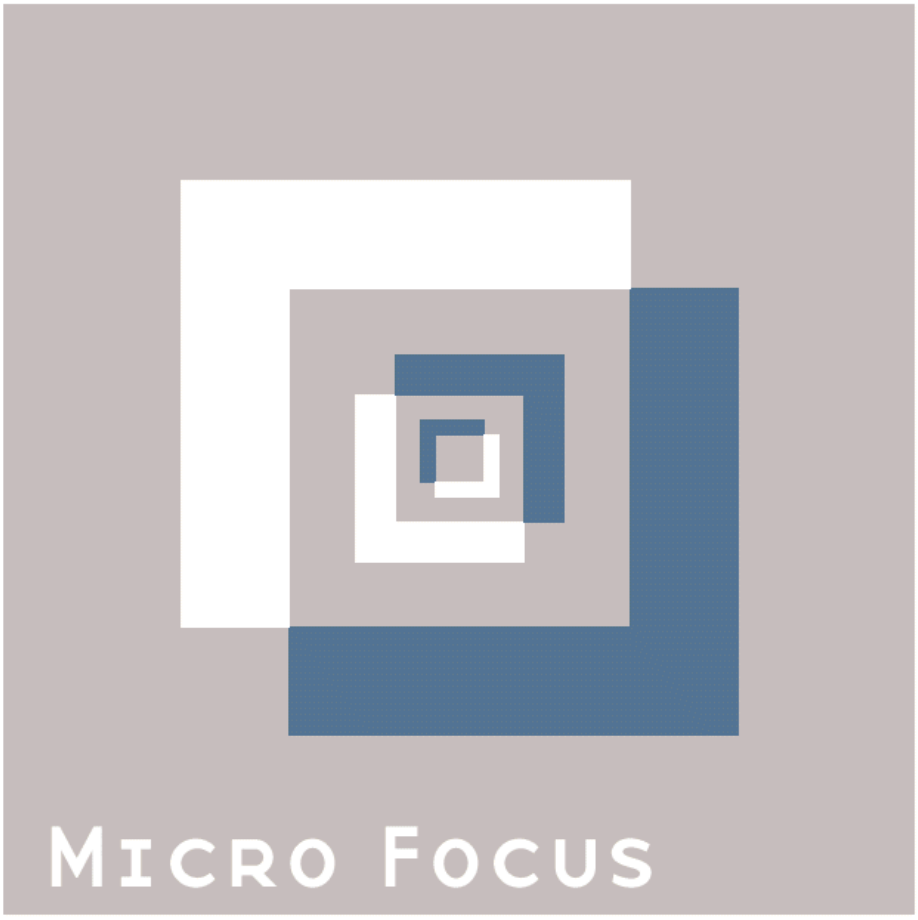

APS for z/OS

Installation Guide

MICRO FOCUS

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1 Installation Requirements

This chapter presents hardware, software, and space requirements required to install APS for z/OS. Please note the following issues and hints for APS for z/OS.

- The APS source COBOL modules were compiled with COBOL for OS/390 version 2.2.
- Micro Focus tested APS for z/OS with:
  - DB2 Version 7.1
  - CICS TS Version 1.3
  - IMS Version 6.1
  - COBOL for OS/390 Version 2.2
- We recommend increasing your MVS region, especially when running OS/390 with the new version of the language environment. If the region size is too small, a 4093 abend occurs.
- To access SPUFI within APS for z/OS, you need to update *PROJECT.GROUP.*CLIST(APS5000) to add an additional DB2 panel library for DB2 4.1 or later. To do so, locate the allocate for ISPPLIB and duplicate the line containing the DB2 panel library (SYS3.DSN410.SDSNSPFP). On the duplicated line, change SDSNSPFP to SDSNPFPE.

Hardware and Software Requirements

APS runs on any processor that supports the following required system software.

- MVS, OS/390, or z/OS
- IBM Language Environment (LE)

APS for z/OS supports the following DB/DC target environments.

- MVS-IMS DC
- MVS-CICS
- MVS-ISPF Dialog
- ISPF Prototype
- MVS-SQL
- MVS-IMS DB
- MVS-IDMS DB
- MVS-VSAM

Virtual Storage Requirements

Generally, APS software requires a 3072K TSO region size. If ISPF and/or COBOL runtime modules are not in the Extended Link Pack Area (ELPA), APS software requires an additional 512-1024K.

APS may require an additional 512-1024K for Online Express. A 2560K region is generally sufficient for batch jobs.

DASD Space Requirements

The APS data sets require approximately 1350 tracks on a 3390 disk, including DB2 support, exclusive of DB2 data space.

COBOL Runtime Libraries

Select a proper runtime library (or libraries) according to which compiler(s) and environments you use. An improper runtime library results in 0C4 abends. Runtime library and compiler combinations are shown below.

The IBM Language Environment is required to run APS.

COBOL Compilers

APS supports the following COBOL compilers:

- OS/VS COBOL
- VS COBOL-II
- COBOL for OS/390

2 Loading APS from the Installation CD

Before you can install APS for z/OS, you must upload the installation files from the CD to the mainframe using FTP.

Pre-loading Checklist

Before you load APS from the installation CD, make a record of the information you need to supply during the process. We recommend you print this document so you can record the information in the following tables.

You should also obtain your site license now. Send an e-mail using the following format:

```
To:      URK@microfocus.com
Subject: APS license request s/n ________
Text:    Your Company Name
         Your Company's Address
         Your Name
         Your Telephone Number
         (optional) Original ordering company name, if known
```

We will send you a return e-mail with two license files attached. Save these two attached license files to a work directory on your PC, and record the location in the table below.

APS Product Prefix

Identify your APS Product Prefix. The first two nodes of your data sets are referred to symbolically as:

- *apshlq*

  Its value should be the owner name, such as, the RACF group that uses APS.

- *apsmlq*

  Its value should identify the APS release you use, such as, APS5000 (Release 5.0)

A sample value is SYS1.APS5000; it would prefix all APS libraries.

User Demo Project (Optional)

A Demo project is shipped on the CD. Installing this demo is optional for existing customers. If you are a new APS customer or if you are installing APS on a new CPU without migrating your existing project, you should plan to install the demo project.

Identify your APS demo project prefix. The first two nodes of your datasets are referenced symbolically as:

- *dmohlq*

  Its value should be the owner name, such as, the RACF group for an APS Project. This can be the same value as *apshlq*.

- *dmomlq*

  Its value should identify the APS group name for the demo project, such as DEMO5000.

We recommend that *dmomlq* be set to a unique value and not be set to the value of *apsmlq*. A sample value is SYS1.DEMO5000; it would prefix all demo project libraries like APSPROG or APSSCRN.

Other Information

Use the following table to record the information you need to complete the upload. This information is referenced, in the JCL and instructions below, using the lower case label that appears here italicized and within parentheses. We recommend that the Mid Level Qualifier (*apsmlq*) be set to the version number APS5000.

Serial Number (*s/n*) **Note:** Your serial number is on the red card shipped inside the APS for z/OS CD case.	
Mainframe TCP/IP HOST name (*yourmainframe*)	
High Level Qualifier for mainframe data set names (*apshlq*)	
Mid Level Qualifier for mainframe data set names (*apsmlq*)	
High Level Qualifier for mainframe demo data set names (*dmohlq*)	
Mid Level Qualifier for mainframe demo data set names (*dmomlq*)	
Data set VOLSER (*dser*)	
Data set Unit (*dunit*)	
Existing JCL Data set name (*jcldatasetname*)	
Drive on your PC where you have inserted the APS for z/OS CD (*drive*)	
Directory on your PC where you have stored the two license files.	

Perform the Upload

Follow the steps below to upload APS for z/OS from the installation CD to your mainframe.

Refer to Table 2-2 for site-specific information as you complete this procedure.

1. Allocate the data sets required for the installation, as follows:

   a. Using the following **FTP** commands, transfer the text format **APSALLOC.JCL** to an existing JCL data set as ***jcldatasetname*(APSALLOC)**. See *Sample APSALLOC.JCL Text Format*.

   ```
   ftp yourmainframe
   ```

   Enter your user ID and password when prompted.

   ```
   put  drive:\apszos\apsalloc.jcl
   'jcldatasetname(apsalloc)'
   ```

   b. Edit the APSALLOC member setting APSHLQ=*apshlq*, APSMLQ=*apsmlq*, DUNIT=*dunit*, and DVOLSER=*dser*. Refer to the note in the JCL regarding data set size calculations.

   c. Change the JOB card, make any other required changes to the JCL, then submit APSALLOC.

   The JCL allocates all the data sets required to continue the installation. Ensure that RC=0. If not RC=0, make the necessary corrections and rerun the JCL. Do not continue until all data sets are successfully allocated.

2. Populate the 16 ***apshlq*.*apsmlq*.F*** data sets, by entering the following FTP commands, one after the other at a command prompt on the PC.

   ```
   ftp yourmainframe
   ```

   Enter your user ID and password when prompted. The prompt changes from a command prompt to an FTP prompt.

   ```
   cd 'apshlq.apsmlq'
   binary
   prompt
   mput drive:\apsz0S\f*
   ```

Ensure successful completion, then end the FTP session:

```
quit
```

3 Edit and submit the JCL that will be used to populate the product data sets.

   a Edit the ***apshlq.apsmlq*.F0** JCL data set making the following changes.

   //* CHANGE ALL &SOUT to SYSOUT class
   //* CHANGE ALL &APSHLQ to *apshlq*
   //* CHANGE ALL &APSMLQ to *apsmlq*

   b Change the JOB card, make any other required changes to the JCL, then submit ***apshlq.apsmlq*.F0**

Do not continue until all data sets are successfully received.

4 (Optional) If you are installing the demo project, using FTP, transfer the text format **DMOALLOC.JCL** to an existing JCL data set as ***jcldatasetname*(DMOALLOC)**. The Demo project.group is used to install the getting started source code and applications. These sample programs should already be in your existing project.group data sets so installing them again is optional.

   a Start a new FTP session or insure that you are prepared to transfer a non-binary TEXT data set.

   ```
   ftp yourmainframe
   ```

   Enter your user ID and password when prompted.

   ```
   put drive:\apszos\demo\dmoalloc.jcl
                                 'jcldatasetname(dmoalloc)'
   ```

   b Edit the DMOALLOC member setting DMOHLQ=*dmohlq*, DMOMLQ=*dmomlq*, DUNIT=*dunit*, and DVOLSER=*dser*. We recommend that *dmomlq* be set to a unique value and not set to the save value as *apsmlq*.

   c Change the JOB card, make any other required changes to the JCL, then submit DMOALLOC.

The JCL allocates the data sets required for the installation of the demo project. Do not continue until all data sets are successfully allocated.

5 (Optional) If you are installing the demo project, populate the 19 ***dmohlq*.*dmomlq*.DEM*** data sets by entering the following FTP commands. We assume that your FTP session is still active from the previous step.

```
cd 'dmohlq.dmomlq'
binary
prompt
mput drive:\apszos\demo\dem*
```

Ensure successful completion, then end the FTP session:

```
quit
```

6 (Optional) If you are installing the demo project, edit and submit the JCL that will be used to populate the DEMO data sets.

a Edit the ***dmohlq*.*dmomlq*.dem0** JCL data set making the following changes. Note that dem0 contains a numeric zero.

//* CHANGE ALL &SOUT to SYSOUT class
//* CHANGE ALL &DMOHLQ to *dmohlq*
//* CHANGE ALL &DMOMLQ to *dmomlq*

b Change the JOB card, make any other required changes to the JCL, then submit ***dmohlq*.*dmomlq*.dem0**.

Do not continue until all data sets are successfully received.

7 Transfer the license information to the mainframe as follows:

a Go to the PC directory where you saved the two license files.

b Start **FTP** at a command prompt as follows:

```
ftp yourmainframe
```

When prompted, enter your mainframe user ID and password.

c Set qualifiers for the mainframe CLIST data set, set the file transfer type to binary, and transfer the **aps@opt** file to the ***apshlq*.*apsmlq*.clist** PDS at the FTP prompt by entering the following commands:

```
cd 'apshlq.apsmlq.clist'
binary
put aps@opt
```

d Set qualifiers for the mainframe CNTL data set, set the file transfer type to binary, and transfer the site ID file to the

***apshlq*.*apsmlq*.cntl** PDS at the FTP prompt by entering the following commands:

```
cd 'apshlq.apsmlq.cntl'
binary
put s/n
```

e End the **FTP** connection by entering **quit** at the FTP prompt.

The transfer of APS for z/OS files from the CD is complete. To install APS for z/OS, see the chapter *Installing APS for z/OS on the Mainframe*.

Note: After installation is complete the intermediate (F*) data sets can be deleted once you have successfully invoked APS for z/OS.

Sample APSALLOC.JCL Text Format

```
//APSALLOC JOB (APS),'ALLOCATE DATASETS',CLASS=A,MSGCLASS=A
//*
//*-------------------------------------------------------------------*
//*                                                                   *
//* APS for z/OS Data Set Allocation                                  *
//*                                                                   *
//* This is the first job to run for APS z/OS installation.           *
//* This job will allocate intermediate product data sets and final  *
//* product libraries. Intermediate data sets are used as the target *
//* of an ftp command to receive product libraries that are stored    *
//* in unloaded format on the product CD-ROM.  When the               *
//* unloaded libraries have been tranferred into the intermediate     *
//* data sets a job is submitted to restore members from the          *
//* unloaded libraries into the final product libraries.              *
//*                                                                   *
//* Customize the following symbolic parameters to fit your           *
//* environment:                                                      *
//*  SOUT   = SYSOUT clase for job print output.                      *
//*  APSHLQ = 1st-level qualifier for data sets that are allocated.   *
//*  APSMLQ = 2nd-level qualifier for data sets that are allocated.   *
//*  DVOLSER= Volume serial number where data sets will be allocated.*
//*  DUNIT  = DASD unit type of the volume specified by DVOLSER.      *
//*                                                                   *
//*  NOTE: The space parameter in the allocations is appropriate for *
//*  for 3380 or 3390 devices.  You may need to change these values   *
//*  if you are installing on another device type.                    *
//*                                                                   *
//*-------------------------------------------------------------------*
```

```
//*
//APSALLOC PROC SOUT='*',      <== SYSOUT class
//         APSHLQ=APS,         <== 1st-level data set name qualifier
//         APSMLQ=APS5000,     <== 2nd-level data set name qualifier
//         DUNIT=3390,         <== DASD unit type
//         DVOLSER=APS001      <== DASD volume serial number
//*
//ALLOCTMP EXEC PGM=IEFBR14
//SYSPRINT DD SYSOUT=&SOUT;//*
//REXX     DD  DISP=(,CATLG),DSN=&APSHLQ..&APSMLQ..F0,
//         UNIT=&DUNIT,VOL=SER=&DVOLSER,SPACE=(TRK,(1,1),RLSE),
//         DCB=(DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=3120)
//*
//APSMACS  DD  DISP=(,CATLG),DSN=&APSHLQ..&APSMLQ..F1,
//         UNIT=&DUNIT,VOL=SER=&DVOLSER,SPACE=(3120,(3200,320)),
//         DCB=(DSORG=PS,RECFM=FB,LRECL=80,BLKSIZE=3120)
//*

etc.
```

3 Installing APS for z/OS on the Mainframe

This chapter explains the installation of APS for z/OS on the mainframe.

MVS Data Set Names

The previous chapter contains a table of data set names. There are two data set names for the APS product referred to as *apshlq* and *apsmlq*. For the work in this chapter and future reference to these datasets in APS for z/OS, they should be known as &APSLIB and &APSREL respectively. We also refer to &APSPRE as the concatenation of both of these data set names. For example, if you set *apshlq* to "SYS1" and *apsmlq* to "APS5000", the value of &APSLIB is "SYS1", &APSREL is "APS5000", and &APSPRE is "SYS1.APS5000".

In the previous chapter we refer to the optional demo project data set names as *dmohlq* and *dmomlq*. For the work in this chapter and future reference to these datasets in APS for z/OS, they should be known as PROJECT and GROUP respectively. We also refer to &DSNPRE as the concatenation of both of these data set names. For example, if you set *dmohlq* to "TEST" and *dmomlq* to "DEMO5000", the value of PROJECT is "TEST", GROUP is "DEMO500", and &DSNPRE is "TEST.DEMO5000".

&APSLIB	*apshlq*	
&APSREL	*apsmlq*	
&APSPRE	*apshlq.apsmlq*	
PROJECT	*dmohlq*	
GROUP	*dmomlq*	
&DNSPRE	*apshlq.dmomlq*	

The Installation Process

During installation, APS displays ISPF installation screens where you enter data. When you complete the installation process, you have:

- A file-tailored CLIST and logon procedure for executing APS software
- JCL residing in appropriate skeleton libraries tailored to your specifications

You can use the CLISTs and JCL as is, or you can modify them to suit your needs.

We recommend that you install and run the normally-generated version of APS before attempting any customization. This way, you're sure to have the APS baseline CLISTs and JCL.

Note: APS does not modify any user-supplied data sets (such as ISPF libraries or COBOL runtime libraries).

Installation Procedure

The steps outlined in this section guide you through the installation procedure. Before you start, you should gather all the information required for the installation. If you do not already have this information, please see the appendix *Pre-installation Checklist*.

Step 1. Copy and Rename APS50SYS CLIST

The data set &APSPRE.CLIST contains a member named APS50SYS. Copy APS50SYS to a TSO system CLIST library that is concatenated to the SYSPROC ddname, and rename it to APS5000.

After you successfully install the APS software, any user can access APS from the TSO READY prompt by typing **%APS5000**. The user is then prompted for the APS software project and group.

Step 2. Link Edit APSMESG and APSCOMP

To link the APSMESG and APSCOMP load modules, edit and submit the APSLINK JCL as follows:

1. Edit the &APSLIB.&APSREL.CNTL(APSLINK) member, setting APSHLQ=&APSLIB, APSMLQ=&APSREL, and SOUT=sysout class
2. Change the JOB card, and make any other required changes to the JCL, then submit APSLINK.

Ensure that RC=0. If not RC=0, make the necessary corrections and rerun the JCL.

Step 3. Execute the APS@PROC CLIST

Execute the APS-supplied CLIST, APS@PROC, to install APS ISPF panels and access the APS software. The APS@PROC CLIST displays data entry panels that primarily request data set name information. APS@PROC then file-tailors the standard APS CLIST and skeleton JCL. Be prepared to supply both the information you gathered on the pre-installation checklist, and the keywords listed below.

Keyword	Description
APSLIB	First level prefix of your &APSPRE.
APSREL	Second level prefix of your &APSPRE.
ISPPLIB	Complete high-level prefix of your system ISPF panel library.

If your &APSPRE is SYS1.APS5000 and your system ISPF panel library data set name is ISP.SISPPENU, execute the APS@PROC CLIST and supply the keywords as follows.

1 From the READY prompt enter:

```
EX 'SYS1.APS5000.CLIST(APS@PROC)' 'APSLIB(SYS1)
APSREL(APS5000)
ISPPLIB(ISP.SISPPENU)'
```

To be prompted for the keywords, enter:

```
EX 'SYS1.APS5000.CLIST(APS@PROC)'
```

2 APS@PROC prompts you to enter the values of APSLIB (SYS1) and APSREL (APS5000); the value of ISPPLIB defaults to ISP.ISPPENU. If the ISPF profile data set has not yet been used, the APS@PROC CLIST also prompts you for the project and group data set. For example, if your &DSNPRE for the the existing project.group data set is TEST.DEMO5000, you respond to the prompts as follows.

```
*** ENTER PROJECT ===> TEST
*** ENTER GROUP ===> DEMO5000
```

The APS@PROC CLIST displays the APS Install Menu with the values you entered for APSLIB and APSREL.

Note: If your APS for z/OS Install Menu does not look like *Figure 3-1*, or if you receive an error message indicating that you need to retrieve a license from Micro Focus, then your license is not installed properly. Go back to Step 1 and perform substeps 6 and 7.

Figure 3-1. APS for z/OS Install Menu

```
-------------------------  APS for z/OS Install Menu  -------------------------
OPTION  ===>

      Customer Name   ===>

      1  APS Project   - Project, Userid Dataset names
      2  ISPF          - ISPF/PDF/SDSF Environments
      3  COBOL         - COBOL Environment
      4  CICS          - CICS Environment
      5  IMS/DLI       - IMS/DLI Environment
      6  Defaults      - APS Miscellaneous
      7  APS Admin     - APS Administration
      8  APS DB2       - APS Environment for DB2
      9  APS Options   - APS Options Defaults
      P  PL/I          - PL/I Environment
      B  Build Project - TEST.DEMO5000
      B2 Build DB2P    - APS.APS5000

      X  EXIT         - Terminate APS Installation

 All APS software: Copyright (C) 1981-2002 Micro Focus International Limited
                   All Rights Reserved.
```

3 On the Install Menu screen, select option **9**.

4 On the APS Options screen, select option **O**.

5 On the Generator Options screen, type **NO** in the OVERRIDE field.

6 Type **END** or press PF3 until you return to the Install Menu screen.

7 On the Install Menu screen, select all options not followed by N/A (not applicable) in sequence, and modify the information as appropriate for your site. For more information about APS@PROC, see*APS@PROC CLIST*. If any data set name field is not applicable (N/A) to your site, type **none** in the field; do not leave any field blank.

8 After completing each of these screens, type **END** or press PF3 to return to the Install Menu. If an error message appears in the top right corner of your screen, correct the appropriate field.

To cancel APS@PROC at any time, press PA1. To begin again, re-execute APS@PROC from the READY prompt. As you proceed through each panel, be sure you fill in all information appropriate for your installation.

Note for SQL users: Select suboption **B2** before exiting the APS Install Menu. This option updates the DB2 CLISTs and ISPSLIB JCL members that

build the APS/SQL common data area. Specific information about the APS/SQL installation is detailed in the following chapter.

---

9 After completing the information on the panels for all applicable options, select option **B**. This option builds the APS5000 CLIST, APS5000 LOGON PROC, and APS5000 panels for your project. These are new members that have no affect on your existing logon dataset.

10 From the Install Menu, type **END** or press PF3 to complete the rest of the installation. APS@PROC CLIST invokes the APS5000 CLIST, built with the B option, that brings up the APS Main Menu (an Micro Focus-modified version of ISR@PRIM). You can access the APS Main Menu again by executing %APS5000 from the READY prompt. For additional information, see *APS@PROC CLIST*.

Warning: Using APS@PROC CLIST to revise values specified during installation (instead of using the above procedure), might reset all the values to their original specifications.

---

11 After completing the APS Install screens and the BUILD option on the APS Install Menu, you may want to change some of the information supplied on the install screens without losing the values specified during installation. To do so, return to the install screens as follows.

- Go to the READY prompt and type **%APS5000** to return to the APS Main Menu.
- Enter **=A.4.2.2.3** in the **Command** field to transfer to the APS ALLOCATE PROJECT DATASETS screen.
- Select option **2** to display and process the APS Install screens and to BUILD APS5000 CLIST, PANEL, and LOGON PROC.

Step 4. Copy the APS LOGON PROC (Optional)

If you want to allocate APS data sets using a TSO logon procedure, copy the APS-generated logon procedure to your system procedure library. The APS@PROC CLIST creates a member named APS5000 in the &DSNPRE.ISPSLIB data set. Copy this member to your system PROCLIB so that you can use it as the logon procedure to access APS.

If your installation has multiple APS project.groups, you must rename APS5000 when copying it to your system PROCLIB because each &DSNPRE project needs its own logon PROC member.

Once you rename and copy the logon procedure into your system PROCLIB, authorize users to use it as you would any new logon procedure.

Step 5. Reblock CLISTs (Optional)

If VB CLISTs are your site standard, reblock the APS-supplied FB &APSPRE.CLIST and &DSNPRE.CLIST.

1. Create new &APSPRE.CLISTX and &DSNPRE.CLISTX variable-blocked CLISTs.
2. Copy, via ISPF 3.3, all the members of &APSPRE.CLIST to APSPRE.CLISTX.
3. Copy, via ISPF 3.3, all the members of &DSNPRE.CLIST to &DSNPRE.CLISTX.
4. Delete &APSPRE.CLIST and rename &APSPRE.CLISTX to &APSPRE.CLIST.
5. Delete &DSNPRE.CLIST and rename &DSNPRE.CLISTX to &DSNPRE.CLIST.
6. Modify &APSPRE.ISPSLIB(SSMPROJ) so that all future CLIST data sets will be VB.

Step 6. Specify a Job Class

If you are installing APS software for the first time, you need to provide job card information. You must specify a job class. You can also specify a job card, for example, card J1, J2, J3, J4, or J5, that appears on the APS JOB CONTROL CARDS screen.

1 Access the APS JOB CONTROL CARDS screen by typing **=A.0.6** from the APS Main Menu.

2 Modify the defaults shown below, for job cards J1 through J5.

APS Job Control Cards Screen

```
------------------  APS Job Control Cards  --------------

OPTION ===>

J1 ===> //userid1 JOB (9999),'userid',
        // CLASS=A,MSGCLASS=X,
        // MSGLEVEL=(0,0)

J2 ===> //userid2 JOB (9999),'userid',
        // CLASS=A,MSGCLASS=X,
        // MSGLEVEL=(0,0)

J3 ===> //userid3 JOB (9999),'userid',
        // CLASS=A,MSGCLASS=X,
        // MSGLEVEL=(0,0)

J4 ===> //userid4 JOB (9999),'userid',
        // CLASS=A,MSGCLASS=X,
        // MSGLEVEL=(0,0)

J5 ===> //userid5 JOB (9999),'userid',
        // CLASS=A,MSGCLASS=X,
        // MSGLEVEL=(0,0)
 ENTER CHANGES or END to EXIT
```

Alternatively, edit file-tailored JCL in &APSPRE.ISPSLIB(SSMJOB). This data set contains sample file-tailored JCL that Micro Focus uses to submit APS jobs. You can set the default job class, &SSMCLASS, and other &SSM variables in &APSPRE.ISPSLIB(APS5000) prior to running the APS@PROC CLIST.

3 If you want to customize the variables temporarily or for only one project, modify &DSNPRE.GENPANEL(APS5000), which you create by

file tailoring the APS@PAN skeleton. Note that these changes are overlaid if you run the APS@PROC CLIST again.

Step 7. Create the DDIFILE

The DDIFILE is a VSAM file that contains information about DBDs and PSBs for IMS or DL/I data bases, and subschema information and file definitions for VSAM files. This step is necessary each time a new &DSNPRE project is created.

1. On the APS Main Menu, enter **=4.3**. The DDIFILE Utilities screen appears.
2. On the APS DDIFILE Utilities screen, select option, **2** Initialize DDI File. APS displays the Initialize DDIFILE screen.
3. On the Initialize DDIFILE screen, enter values for the following fields.

Field Name	Value
Number of Records	Appropriate number of records for your DBD, PSB, or subschema DDIFILE. Calculate the number of records as follows: • Eight records per DBD • Three records per PSB • For VSAM subschemas, two records per DDISRC member.
Number of Secondary	Default: blank (0); you can override.
VSAM Volume ID	Your VSAM volume ID
Replace any Existing DDIFILE	Yes or no

4. Press Enter to submit the batch job that creates the DDIFILE.
5. Initial load the dataset as follows.
   a. Edit &DSNPRE.DDIBKUP.

b Insert 21 zeroes into the first record.

c Save the dataset.

d Go to the DDIFILE Utilities screen (**=4.3**).

e Select option **4**, Restore DDI. Press Enter.

Step 8. Install APSCOMP in ELPA (Optional)

APSCOMP is an APS precompiler that runs in the Extended Link Pack Area (ELPA). This precompiler is a special option available to users of MVS/XA with COBOL for MVS runtime libraries (APSCOMP replaces APSBIG).

Before you install APSCOMP in the ELPA, be sure that you have the COBOL for MVS runtime library (1.5 or higher) installed in your ELPA.

1. Copy &APSPRE.LOADLIB2(APSCOMP) to a system ELPA library.
2. Copy &APSPRE.LINKLST to a system LINKLIST library.
3. IPL your system with the CLPA option before activating APSCOMP.
4. Activate or deactivate APSCOMP for any &DSNPRE project.
5. Run A.4.2.2.3.2.6 for the project. To do so, specify **YES** or **NO** to APS Pre-Compiler in ELPA on the Miscellaneous System Defaults panel.

Creating New Projects and Groups

After installation, allocate additional project and group data sets.

1. From the APS Main Menu, enter option **4** in the **Option** field.
2. Enter option **2** in the **Option** field.
3. Enter option **1** in the **Option** field.
4. Enter option **3** in the **Option** field. The APS Project Dataset Configuration screen displays.

5 Complete the Project Dataset Configuration screen fields.

Field	Description
Target Project	The name of the new project. For example, myproj. Must be 1-8 alphanumeric characters; the first character must be alphabetic.
Target Group	The name of the new Group. For example, mygrp. Must be 1-8 alphanumeric characters; the first character must be alphabetic.
Create Data Element Library	Default: No. A Data Element library is automatically created during APS installation. We recommend that you have just one Data Element library so that you can easily maintain centralized control of your data elements.
Disk Volume	Enter a valid volume serial number.
Disk Unit	Valid values are 3330, 3340, 3350, 3380 DISK.
Target DDI Prefix	The project and group qualifiers of the DDIFILE data set for the new Project and Group. Default: *targetproject.targetgroup*.

6 Select option **1**, Allocate Project Datasets. The Allocate Project Datasets screen displays.

7 Complete the Allocate Project Datasets screen fields.

Field Name	Value
Create DDIFILE	Yes or no.
Target DDI Prefix	Accept default values or override.
Number of Records	Appropriate number for new Project and Group. Calculate the number of records as follows. • Eight records per DBD • Three records per PSB • For VSAM subschemas, two records per DDISRC member.

Field Name	Value
Number of Secondary	Default is blank (0); you can override.
VSAM Volume	Your VSAM volume ID.
Replace DDIFILE	Yes or no.

8. Press Enter to submit batch jobs to create the DDIFILE and the new Project and Group.
9. After both jobs complete, display the APS Project Dataset Configuration screen.
10. On the APS Project Dataset Configuration screen, select option **B** to build the APS5000 CLIST, skeleton logon procedure, and panel for the new Project and Group.

4 Installing APS/SQL Subschema Maintenance Utilities

This chapter contains information about installing APS with SQL subschemas.

APS/SQL Installation Requirements

Hardware and Software Requirements

APS/SQL Subschema Utilities run on any processor that supports:

- MVS, MVS/XA or MVS/ESA
- ISPF/PDF Version 2 (or higher)
- DB2 Version 1 Release 2 (or higher)

Virtual Storage Requirements

The same as those for APS for z/OS.

DASD Space Requirements

Approximately 1,250 tracks on a 3380 disk.

- 150 tracks for the APS/SQL Subschema Utilities software data sets (included in the APS Install library space estimate)
- 800 tracks (primary DB2 tablespace allocations) for the APS/SQL common data area

- 300 tracks (secondary DB2 tablespace allocations) for the APS/SQL common data area

Installing for the First Time

To establish the SQL components of APS/SQL Subschema Maintenance Utilities, you

- Create the APS/SQL common data area.
- Bind the Subschema Utilities application plans.
- Grant execution authority on the Subschema Utilities plans.
- Link the Subschema Utilities.

The installation process takes you through a number of tailoring and data collection steps. When you complete these steps you have generated

- JCL (DB2SDYNM) to bind the Dynamic SQL Processor executed by DB2SMAKE and DB2SGRNT (see below)
- JCL (DB2SLINK) to relink the Subschema Utilities load modules
- JCL (DB2SMAKE) to generate the DB2 tables for the APS/SQL common data area
- JCL (DB2SBIND) to bind the Subschema Utilities application plans with the APS/SQL common data area
- JCL (DB2SGRNT) to grant the DB2 authority necessary to access the APS/SQL common data area and the DB2 catalog and to execute Subschema Utilities
- ISPF panels necessary to execute the Subschema Utilities
- JCL in appropriate skeleton libraries to your specifications

You can use the CLISTs, panels, and skeletons as is, or you can modify them. We recommend testing the generated version of the utilities before customizing.

If you have never installed any version of the Subschema Maintenance Utilities, perform the following steps.

Step 1. Build Profile Variables

Access the APS Install Menu screen to specify DB2 libraries and system defaults for the APS/SQL installation. Process the BUILD option from the DB2 Install Menu and from the APS Install Menu.

Note: If you supplied and processed DB2 information when completing *Step 5. Execute the APS@PROC CLIST* it is not necessary to do this step.

Step 2. Link the Utilities

If you are installing or reinstalling, link the APS/SQL Subschema Maintenance Utilities system software load modules. The APS/SQL modules must be link-edited with the IBM/SQL interface modules (DSNHADDR and DSNELI) and error handling module (DSNTIAR).

Data set &APSPRE.ISPSLIB(DB2SLINK) contains JCL to link APS/SQL modules to the IBM/DB2 interfaces. Edit this JCL according to the comment cards and submit this job.

Step 3. Bind the SQL Processor

You must bind the APS dynamic SQL processor, A1DPUTL, used by the JCL members DB2SMAKE (see step 4) and DB2SGRNT (see step 4). The JCL executes the SQL statements that create the APS/SQL common data area and grant authority for its use. Bind as follows.

Edit the data set &APSPRE.ISPSLIB(DB2SDYNM). Follow the directions for job card modification in DB2SDYNM.

Submit the job for execution. It is not necessary to grant execute authority on the A1DPUTL plan if the same user ID used when executing DB2SMAKE and DB2SGRNT is used for the DB2SDYNM JCL.

Step 4. Create Data Area and Table Views

You must create the APS/SQL common data area and the catalog table views. The common data area is a DB2 data base which is a physical and logical subset of the APS Application Dictionary.

1. Edit the data set &APSPRE.ISPSLIB(DB2SMAKE). Follow the directions for job card modification in the DB2SMAKE JCL. DB2SMAKE allocates a storage group, APSENC06. This allocation should either be
   - Modified to use volumes available at your installation.
   - Removed entirely from the input cards in DB2SMAKE. If you remove APSENC06, change all occurrences of APSENC06 to point to an existing storage group at your installation.
2. Submit DB2SMAKE for execution; it must complete with condition code zero (0).
3. If a CREATE fails, investigate the reason for the failure and correct it. Then, modify and submit &APSPRE.ISPSLIB(DB2SDROP), which drops the DB2 objects created by DB2SMAKE. If you need assistance, call the APS Answerline.

If you prefer SPUFI as the mechanism for processing DB2 DDL statements, copy the SYSIN control cards used in DB2SMAKE in pieces or as a whole into a separate data set and execute them interactively.

Note: Removing the COMMIT statements is optional. Optimal SPUFI performance can be achieved if they are left in the DDL statements for DB2SMAKE.

Step 5. Bind the Utilities

Bind the APS/SQL Subschema Utilities system software application plans as follows.

1. Edit the data set &APSPRE.ISPSLIB(DB2SBIND), following the directions for job card modification.

2. Do not change the bind parameters or plan names used in DB2SBIND. These plan names are created by the BUILD process executed during the interactive portion of the install. If the plan names generated in the DB2SBIND JCL are not acceptable, return to *Step 1. Build Profile Variables* and provide a different DB2 plan prefix.
3. Submit DB2SBIND for execution; it must complete with condition code zero (0) for each bind step.
4. If any bind step fails, investigate the reason for the failure and correct it. Then, resubmit the DB2SBIND.

Note: Do not alter the Subschema Utilities plan suffixes.

---

5. When DB2SBIND is complete, execute the Subschema Utilities from the TSO user ID you used to create the APS/SQL common data area and to bind the Subschema Utilities application plans.

Step 6. Grant Utility Authorization

You must grant authorization for the subschema utilities to allow

- Execution of utility programs
- Access to the APS/SQL common data area
- Access to the DB2 system catalog tables referenced by the Subschema Utilities
- Edit the data set &APSPRE.ISPSLIB(DB2SGRNT). Follow the directions for job card modification in DB2SGRNT.
- Modify the grant cards in DB2SGRNT to restrict authority to certain users. In general, all authority for the Subschema Utilities is granted to PUBLIC (that is, all users with access to DBP).
- Submit DB2SGRNT for execution; it must complete with condition code zero (0). When DB2SGRNT is complete, the users specified in the grant cards can execute the Subschema Utilities.

If you prefer SPUFI for processing DB2 DDL statements, copy the SYSIN control cards used in DB2SGRNT in pieces into a separate data set and execute interactively.

Note: Removing the COMMIT statements is optional. You can achieve better SPUFI performance if they are left in the DDL statements for DB2SGRNT.

Step 7. Utility Security

Security for the utilities is enforced through the native DB2 grant authorization mechanism. The DB2 grant statements give the authorization necessary to browse objects from the utilities in the DB2 catalog and to browse the APS/SQL common data. DB2 grant statements provide authorization for a specific DB2 object type, for example, a database or a table.

You must decide who receives authority and for which objects. You assign SELECT authorization on specific DB2 system tables for the Subschema Utilities application plans. These authorizations are in addition to those provided by the DB2SGRNT JCL. The user ID binding the Subschema Utilities application plans using the DB2SBIND JCL must have SELECT authorization on the following DB2 system tables.

- SYSIBM.SYSCOLUMNS
- SYSIBM.SYSDATABASE
- SYSIBM.SYSFIELDS
- SYSIBM.SYSFOREIGNKEYS
- SYSIBM.SYSINDEXES
- SYSIBM.SYSINDEXPART
- SYSIBM.SYSKEYS
- SYSIBM.SYSPLANDEP
- SYSIBM.SYSRELS
- SYSIBM.SYSSTOGROUP

- SYSIBM.SYSSYNONYMS
- SYSIBM.SYSTABLEPART
- SYSIBM.SYSTABLES
- SYSIBM.SYSTABLESPACE
- SYSIBM.SYSTBAUTH
- SYSIBM.SYSVIEWDEP
- SYSIBM.SYSVIEWS
- SYSIBM.SYSVOLUMES

Step 8. Link EXPLAIN

This facility is for use with Online Express only. If you are installing or reinstalling the EXPLAIN Facility, link the EXPLAIN modules. The data set &APSPRE.ISPSLIB(A2OXLINK) contains JCL to link EXPLAIN modules. Edit the JCL according to the comment cards and submit the job.

Step 9. Bind EXPLAIN

If you are installing or reinstalling the EXPLAIN facility, bind the EXPLAIN facility application plan.

1. Edit the dataset &APSPRE.ISPSLIB(A2OXBIND). Follow the directions for job card modification.
2. Do not change to the bind parameters in A2OXBIND. These parameters retain authorizations granted during previous installations of the EXPLAIN facility. Therefore, when reinstalling, it is not necessary to execute A2OXGRNT (see *Step 10. Grant EXPLAIN Authorization*).

   Do not change the plan names in A2OXBIND. These names are created by the BUILD process executed during the interactive portion of the install. To change the plan names generated in A2OXBIND JCL, return to A2OXBIND and provide a different DB2 plan prefix.

3 Submit A2OXBIND for execution.

Note: Do not alter EXPLAIN facility plan suffixes.

Step 10. Grant EXPLAIN Authorization

If you are installing the EXPLAIN Facility for the first time, grant authorization to allow execution of the EXPLAIN facility modules. If you are reinstalling the EXPLAIN facility, skip this step.

1 Edit the data set &APSPRE.ISPSLIB(A2OXGRNT).

2 Edit the JCL according to the comment cards and submit the job. This data set contains JCL to grant authorization for the EXPLAIN modules.

3 If you want to identify specific authorized users, modify the grant card in A2OXGRNT to your requirements. Otherwise, authority for the EXPLAIN facility is granted to PUBLIC.

Verifying APS/SQL Subschema Maintenance Utilities

First, create the sample SQL subschema, D2MASTER, using the Subschema Maintenance Utilities, and import the subschema into APS. You use the subschema, D2MASTER, when you execute the following sample SQL applications.

- ISPF Prototype/SQL
- ISPF Dialog/SQL
- IMS/SQL (if you are using Online Express)
- CICS/SQL

Verify Utility Access

1. Go to the APS Project Group Environment screen and make sure the Project and Group is set to the demo Project and Group created at installation (=A.0.2).

2. Go to the APS Generator Options screen (**=A.0.1**). Set the Target field to **MVS** and the SQL field to **DB2**.

3. Go to the APS Utilities Menus (**=A.4**).

4. Select option **4**, SQL Subschema Maintenance Utilities.

5. Select option **B**, Browse Facility. APS displays the DB2 Browse menu.

   If the Browse menu does not display, APS displays one of the following error messages.

   - Subsystem Connection Failure. Check that the DB2 subsystem upon which the utilities was installed is operational. If not, restart the subsystem.

     Verify that the DB2 subsystem identifier specified during the APS for z/OS installation process is the actual subsystem identifier for your use. To verify this value, browse the member, APS 5000, in the library &PROJECT.&GROUP.GENPANEL and find the ISPF variable assignment for &SSMBSYSN. The &SSMBSYSN value should be the name of the DB2 subsystem where the utilities execute. If this value is incorrect, access the APS Install Menu by starting at the APS Main Menu and selecting the following options one by one: **4**, **2**, **1**, **3**, **2**. Then specify the correct subsystem identifier.

   - DB2 SQL error. If an error may have occurred during the execution of the DB2SBIND JCL, correct the problem and rerun the DB2SBIND step.

     The Subschema Maintenance Utilities load library, &APSPRE.ISPLLIB, might not be allocated properly. Check the allocations for the utilities data sets. Verify that the ISPLLIB is allocated and that the DCB information for data sets also allocated does not conflict with the utilities load library DCB.

6. Enter the **END** command repeatedly until you return to the Main Menu.

7. Select option **0**, Options

8 Select option **6**, Job Control Cards. Modify the job cards to meet the requirements of your installation.

9 Enter the **END** command repeatedly until you return to the Main Menu.

Import a DB2 Database and Create a Subschema

First import the DB2 database, APSDMODB, to the APS/SQL common data area. Then, create the SQL subschema, D2MASTER, populating it with two tables from the common data area. Finally, import the subschema using the APS SQL Importer. The import process generates the DDI symbols and DCLGEN copybooks necessary for executing subsequent sample applications.

Create DDL statements

1 To access the APS/SQL Subschema Maintenance Utilities screen, type =A.4.4 on the APS Main Menu.

2 Select option **I**, DB2 Interactive Facilities.

3 Select option **1** and execute SPUFI using the member DB2LOAD, which is stored in the APS-supplied partitioned data set &PROJECT.&GROUP.CNTL.

4 Press PF3 and then press Enter.

5 Enter the **END** command repeatedly until you return to the Main Menu.

Import the APSDMODB database

1 From the APS Main Menu, select option **2**, Dictionary Services.

2 From the Dictionary Services Menu, select option **1**, Import Facilities.

3 From the Import Facilities screen, select option **1**, SQL.

4 Select option **1**, SQL Importer. The DB2/DB2P Object Import screen displays.

5 Type the following values for fields on the DB2/DB2P Object Import screen.

Field	Value
OBJECT NAME	Leave blank to display a list of the databases defined to the DB2 catalog.
JOB CLASS	Specify a job class valid for your site.
OBJECT ONLY	N
REPORT ONLY	N
SUBMIT JOB NOW	Y

6 Press Enter, to display the list of databases.

7 Select APSDMODB. Type **S** to the left of its name and press Enter.

8 Enter the END command twice to submit a job that imports APSDMODB.

9 Enter the END command repeatedly until you return to the Main Menu.

10 Go to the APS/SQL Subschema Maintenance Utilities screen (**=A.4.4**) to create the subschema D2MASTER to APS.

11 Select option **S**, APS/SQL Subschema Painter.

Create the D2MASTER subschema

1 Type *A* (for Add) in the OPTION field, type the name D2MASTER in the SUBSCHEMA NAME field, and press Enter to display a list of the tables defined in the APS/SQL common data area; the list displays on the Table/View List screen.

2 Select tables D2MASTER and D2STOCK by typing an **S** beside each table name and pressing Enter.

3 Enter the **END** command to display the Subschema Tables screen, which lists the two tables you just selected for the D2MASTER subschema.

4 Assign a copybook name for each table. The names should be the same as the table names. Rather than manually typing the names, you can type an equal sign (=) next to each table name and press

Enter. This automatically inserts the table names into the COPYBOOK fields.

5 Enter the **END** command to add the D2MASTER subschema to the APS/SQL common data area.

6 Continue entering the **END** command until you return to the APS Main Menu.

Generate symbols and copybooks

1 Go to the APS SQL Importer screen (**=A.2.1.1**) to generate DDI symbols and DCLGEN copybooks for the D2MASTER subschema.

2 Type D2MASTER in the MEMBER field, select option **2**, Generate DDISYMB symbols from DDIFILE, and press Enter. APS submits a batch job to create the DDISYMB symbols and copybooks.

A Pre-installation Checklist

To prepare for installation, first gather site and project-specific data. Using the screen representations as your guide, enter your site and project-specific data on the tables that follow. You supply this data during the installation procedure to tailor the JCL and the logon PROC that invokes APS.

Figure 4-1. APS for z/OS Install Menu

```
-------------------------  APS for z/OS Install Menu  ------------------------
OPTION  ===>

      Customer Name   ===>

      1  APS Project   - Project, Userid Dataset names
      2  ISPF          - ISPF/PDF/SDSF Environments
      3  COBOL         - COBOL Environment
      4  CICS          - CICS Environment
      5  IMS/DLI       - IMS/DLI Environment
      6  Defaults      - APS Miscellaneous
      7  APS Admin     - APS Administration
      8  APS DB2       - APS Environment for DB2
      9  APS Options   - APS Options Defaults
      P  PL/I          - PL/I Environment
      B  Build Project - TEST.DEMO5000
      B2 Build DB2P    - APS.APS5000

      X  EXIT         - Terminate APS Installation

 All APS software: Copyright (C) 1981-2002 Micro Focus International Limited
                   All Rights Reserved.
```

Note: The file tailoring members in ISPSLIB refer to this prefix symbolically as &SSMDSN and &SSMPRJ.&SSMGRP.

Figure 4-2. APS Project/Group Screen

```
-----------------------------  APS Project/Group  -----------------------------
OPTION  ===> 


             Project     ===>
             Group       ===>
             Disk Volume ===>
             Unit        ===>


   Data Element Prefix   ===>

   (VSAM) DDIFILE Prefix ===>

   Userid data sets
     Profile DSN         ===>
     Clist DSN (or NONE) ===>

   Temporary File UNIT   ===>           ( eg: Sysda; Not VIO )

   Use TSO/E REUSE       ===>           (Yes or No)

   DBCS Support          ===>           (Yes or No)
```

Project	
Group	
Disk Volume	
Unit	
Data Element Prefix	
(VSAM) DDIFILE Prefix	
Userid data sets	
Profile DSN	
Clist DSN (or NONE)	
Temporary File UNIT	
Use TSO/E REUSE	
DBCS Support	

Comments

- The default project.group for the VSAM DDIFILE is the same as the value of your &DSNPRE project.group.
- The file tailoring members in ISPSLIB refer to the DDIFILE prefix symbolically as &DDIPRE.

Figure 4-3. ISPF/PDF/SDSF Environments

```
-----------------------  ISPF/PDF/SDSF Environments  --------------------------
OPTION  ===> 


 Is ISPF/PDF installed in LINKLIST/LPA? ===>      ( Yes or No )

 ISPF/PDF Version  ===>          ( Ex. 4.8 )

 ISPF CUA Mode     ===>          ( Yes or No )

       1  -   ISPF Data Set Names
       2  -   PDF  Data Set Names
       3  -   SDSF Data Set Names
```

Is ISPF/PDF installed in LINKLIST/LPA?	
ISPF/PDF Version	
ISPF CUA Mode	

Figure 4-4. ISPF Environment

```
----------------------------  ISPF Environment  ------------------------------

    Data Set Name Prefix:

    Enter FULL Data Set Names Below:

       ISPCLIB  ===>
       ISPLOAD  ===>
       ISPMLIB  ===>
       ISPPLIB  ===>
       ISPSLIB  ===>
       ISPTLIB  ===>

    DBCS Support:

       ISPMKLB  ===>
       ISPPKLB  ===>

 To reset to original prefix, blank out desired data set names
 and type "reset" in OPTION field.


OPTION  ===> 
```

Data Set Name Prefix	
Enter FULL Data Set Names Below:	
ISPCLIB name	
ISPLOAD name	
ISPMLIB name	
ISPPLIB name	
ISPSLIB name	
ISPTLIB name	
DBCS Support:	
ISPMKLB name	
ISPPKLB name	

Figure 4-5. PDF Environment

```
----------------------------  PDF Environment  -------------------------------

    Data Set Name Prefix:

    Enter FULL Data Set Names Below:

       ISRLOAD  ===>
       ISRMLIB  ===>
       ISRPLIB  ===>
       ISRSLIB  ===>
       ISRTLIB  ===>

    DBCS Support:

       ISRMKLB  ===>
       ISRPKLB  ===>
       ISRSKLB  ===>

 To reset to original prefix, blank out desired data set names
 and type "reset" in OPTION field.


OPTION  ===> ▌
```

Data Set Name Prefix:	
Enter FULL Data Set Names Below:	
ISRLOAD	
ISRMLIB	
ISRPLIB	
ISRSLIB	
ISRTLIB	
DBCS Support:	
ISRMKLB	
ISRPKLB	
ISRSKLB	

Figure 4-6. SDSF Environment

```
-----------------------------  SDSF Environment  -----------------------------
OPTION  ===>

    Data Set Name Prefix:

    Enter FULL Data Set Names Below:

       ISFLOAD  ===>
       ISFPLIB  ===>
       ISFTLIB  ===>
```

Data Set Name Prefix:	
Enter FULL Data Set Names Below:	
ISFLOAD	
ISFPLIB	
ISFTLIB	

Figure 4-7. COBOL Environments

```
----------------------------  COBOL Environments  -----------------------------
OPTION  ===>

 Default for COBOL  ===>      ( 1 = OS/VS COBOL ,
                                2 = VS COBOL-II ,
                                3 = COBOL for OS/390 )

  OS/VS COBOL:             Compiler Library ===>
                        Runtime/Link Library ===>

  VS COBOL-II:             Compiler Library ===>
                        Runtime/Link Library ===>
                    CICS Runtime/Link Library ===>

  COBOL for MVS:           Compiler Library ===>
                               Link Library ===>
                            Runtime Library ===>
                    CICS Runtime/Link Library ===>


 Are OS/VS COBOL   Libraries in LINKLIST/LPA ? ===>      ( Yes, No )
 Are VS COBOL-II   Libraries in LINKLIST/LPA ? ===>      ( Yes, No )
 Are COBOL for MVS libraries in LINKLIST/LPA ? ===>      ( Yes, No )
```

Default for COBOL	
OS/VS COBOL:	
Compiler Library	
Runtime/Link Library	
VS COBOL II:	
Compiler Library	
Runtime/Link Library	
CICS Runtime/Link Library	
COBOL for MVS:	
Compiler Library	
Link Library	
Runtime Library	
CICS Runtime/Link Library	
Are OS/VS COBOL Libraries in LINKLIST/LPA?	
Are VS COBOL-II Libraries in LINKLIST/LPA?	
Are COBOL for MVS Libraries in LNKLIST/LPA?	

Figure 4-8. CICS Environments

```
---------------------------  CICS Environments  -----------------------------

 Default CICS Release ===>       ( Non-Blank, A or B )


 CICS VERSIONA:
      (CICS) Linklib Library ===>
   CICS (COBOL) Copy Library ===>
      ASM(BMS) Macro Library ===>
    DLI Linklib Library      ===>

 CICS VERSIONB:
      (CICS) Linklib Library ===>
   CICS (COBOL) Copy Library ===>
      ASM(BMS) Macro Library ===>
    DLI Linklib Library      ===>









OPTION  ===>
```

Default CICS Release	
CICS VERSIONA:	
(CICS) Linklib Library	
CICS (COBOL) COPY Library	
ASM(BMS) MACRO Library	
DLI Linklib Library	
CICS VERSIONB:	
(CICS) Linklib Library	
CICS (COBOL) COPY Library	
ASM (BMS) MACRO Library	
DLI Linklib Library	

Figure 4-9. IMS Environments

```
-----------------------------  IMS Environments  -----------------------------
OPTION  ===> 

 Default IMS Release ===>      ( Non-Blank, A or B )


 IMS VERSIONA:
     LINKLIB(RESLIB) Library ===>
           IMS MACRO Library ===>
          MFS FORMAT Library ===>
        MFS REFERRAL Library ===>
         BTS LINKLIB Library ===>

 IMS VERSIONB:
     LINKLIB(RESLIB) Library ===>
           IMS MACRO Library ===>
          MFS FORMAT Library ===>
        MFS REFERRAL Library ===>
         BTS LINKLIB Library ===>
```

Default IMS Release	
IMS VERSIONA:	
LINKLIB(RESLIB) Library	
IMS MACRO Library	
MFS FORMAT Library	
MFS REFERRAL Library	
BTS LINKLIB Library	
IMS VERSIONB:	
LINKLIB(RESLIB) Library	
IMS MACRO Library	
MFS FORMAT Library	
MFS REFERRAL Library	
BTS LINKLIB Library	

Figure 4-10. APS Miscellaneous

```
----------------------------  APS Miscellaneous  -----------------------------
OPTION  ===>

 APS Precompiler in ELPA  ===>      ( No )
   ( Please reference Install Guide BEFORE Answering other than NO )


 System (Assembler) Macro Libraries:

   (EG:) SYS1.MACLIB      ===>
                          ===>
                               ( or NONE )


 Enable Online Express EXPLAIN support  ===>      ( Yes, No )
   ( Requires usage of APS supplied Call Attach Facility )


 Enable APS Version Control Commands    ===>      ( Yes, No )
   ( ISPF Commands: CI, CO, VP, DF, NDVR )
```

APS Precompiler in ELPA	
System (Assembler) Macro Libraries:	
(EG:) SYS1.MACLIB	
Enable Online express EXPLAIN support	
Enable APS Version Control Commands	

Figure 4-11. APS Administration

```
----------------------------  APS Administration  -----------------------------
OPTION  ===>


                      APS ADMINISTRATION CONFIGURATION

   APS Administrator ID           ===>             Ext ===>
   Alternate APS Administrator ID ===>             Ext ===>



   Is the APS MENU a PRIME MENU? ===>            (Yes or No)

   Batch Job Submission User Exit ===>           (Yes or No)
                         Exit Type ===>          (CMD, PGM, PANEL)
                         Exit Name ===>

   Application Painter User Exit  ===>           (Program Name)
```

APS Administrator ID	
Ext	
Alternate APS Admnistrator ID	
Ext	
Is the APS MENU a PRIME MENU?	
Batch Job Submission User Exit	
Exit Type	
Exit Name	
Application Painter User Exit	

Figure 4-12. Define DB2 Environment

```
-------------------------  Define DB2 Environment  ---------------------------

 APS Specific for DB2:
     Catalog Browse            ===>      ( Yes or No )
     Plan prefix               ===>      ( DB2P Application PLAN Prefix )
     Allow duplicate copybook  ===>      ( Yes or No )
 DB2 Libraries:
     DB2  Linklib            ===>
     DB2  Exitlib            ===>
     DB2  Panel Lib          ===>
     DB2I Panel Lib          ===>
     DB2  Message Lib        ===>
     DB2  CLIST Lib          ===>
     DB2  Copylib            ===>
 DB2 Release:
     DB2 System ID           ===>         ( eg: DB2  or NONE )
     DB2 Version Release Mod ===>         ( eg: 410,510,610,710,... )
     DB2 Location(local)     ===>
     DB2 DATE string format  ===>         ( eg: ISO, USA, EUR, JIS, LOCAL)
     DB2 DATE length         ===>         ( if LOCAL 10-254 else 0)
     DB2 TIME string format  ===>         ( eg: ISO, USA, EUR, JIS, LOCAL)
     DB2 TIME length         ===>         ( if LOCAL 10-254 else 0)

OPTION  ===>
```

APS Specific for DB2:	
Catalog Browse	
Plan prefix	
Allow duplicate copybook	
DB2 Libraries:	
DB2 Linklib	
DB2 Exitlib	
DB2 Panel Lib	
DB2 Message Lib	
DB2 CLIST Lib	
DB2 Copylib	
DB2 Release:	
DB2 System ID	
DB2 Version Release Mod	
DB2 Location(local)	
DB2 DATE string format	
DB2 DATE length	
DB2 TIME string format	
DB2 TIME length	

Figure 4-13. APS Options

```
-------------------------------  APS Options  ---------------------------------
OPTION  ===>


     BO  APS BIND     - APS BIND Options Defaults           (optional)
     IO  APS IDMS     - APS IDMS Options Defaults           (optional)
     IC  APS IDMS     - APS IDMS/DC Options Defaults        (optional)
      J  Job Cards    - APS Job Control Cards Defaults      (Optional)
      O  APS Options  - APS Generator Options Defaults      (Optional)
      I  APS Options  - APS International Options Defaults  (Optional)
      P  APS Parms    - APS Precompiler Parameters Defaults (Optional)
     RO  APS EXPORT   - APS Report Generator Defaults       (Optional)
```

Figure 4-14. APS Bind Options

```
----------------------------  APS BIND Options ------------------------------
OPTION  ===>

 OVERRIDE ===>

 Plan Name                  ===>            (If different from APPLICATION)
 Action                     ===>            (ADD or REPLACE)
 Retain Execution Authority ===>            (YES or NO)
 Isolation Level            ===>            (RR or CS)
 Plan Validation Time       ===>            (RUN or BIND)
 Resource Acquisition Time  ===>            (USE or ALLOCATE)
 Resource Release Time      ===>            (COMMIT or DEALLOCATE)
 Explain Path Selection     ===>            (YES or NO)
 Owner Of Plan (AUTHID)     ===>            (Blank or one of the primary or
                                             secondary authorization IDs)
 Defer Prepare              ===>            (YES or NO)
 DB2 System Name            ===>
```

OVERRIDE	
Plan Name	
Action	
Retain Execution Authority	
Isolation Level	
Plan Validation Time	
Resource acquisition Time	
Resource Release Time	
Explain Path Selection	
Owner of Plan (AUTHID)	
Defer Prepare	
DB2 System Name	

Figure 4-15. APS IDMS Parameter Specification

```
--------------------  APS IDMS Parameter Specification  -----------------------
OPTION  ===> 

  OVERRIDE ===>

  Dictionary Name          ===>
  Central Version or Local ===>           (Compile Environment. CV or LOCAL)
  IDMS Local Jrnl Disk Vol ===>           (If LOCAL Compiling)
  Dictionary Update        ===>           (Yes or No)
  IDMS DMLC Output to PDS  ===>           (Yes or No)
  IDMS "LOADLIB" Qualifier ===>
  IDMS SYSCTL DSN          ===>
  IDMS Dictionary DSN      ===>
  CV Node Name             ===>           (Blank or Alternate Node Name)
  DMLIST (List Generation) ===>           (Yes or No)
  Generate DB-BIND in pgm  ===>           (Yes or No)

  IDMS modules to be included in link edit:

    INCLUDE IDMSLIB(                                ) DC TARGET = CICS
    INCLUDE IDMSLIB(                                ) DC TARGET = MVS
    INCLUDE IDMSLIB(                                ) DC TARGET = Other

  IDMS 12.0 SYSIDMS DSN    ===>
```

OVERRIDE	
Dictionary Name	
Central Version or Local	
IDMS Local Jrnl Disk Vol	
Dictionary Update	
IDMS DMLC Output to PDS	
IDMS "LOADLIB" Qualifier	
IDMS DSYSCTL DSN	
IDMS Dictionary DSN	
CV Node Name	
DMLIST (List Generation)	
Generate DB-BIND in pgm	
IDMS modules to be included in link edit:	
INCLUDE IDMSLIB ( )DC TARGET = CICS	
INCLUDE IDMSLIB ( )DC TARGET = MVS	
INCLUDE IDMSLIB ( )DC TARGET = Other	

Figure 4-16. APS IDMS/DC Parameter Specification

```
-------------------  APS IDMS/DC Parameter Specification  ---------------------
COMMAND ===> 

  OVERRIDE ===>

  Save Autopanel DDDL      ===>           (Yes or No)
  Save Work Record DDDL    ===>           (Yes or No)
  Work Record Prefix       ===>           (Blank for default)
  Work Record Suffix       ===>           (Blank for default)
  Screen Version           ===>
```

OVERRIDE	
Save Autopanel DDDL	
Save Work Record DDDL	
Work Record Prefix	
Work Record Suffix	
Screen Version	

Figure 4-17. APS Default Job Control Cards

```
----------------------  APS Default Job Control Cards  ------------------------
OPTION ===> 
                        CLEAR - Clear J1-J5       SET - Model J1-J5
 OVERRIDE ===>
       J1 ===> //&ZUSER.1 JOB (&SSMACCT),''&ZUSER'',
               // CLASS=&SSMCLASS,MSGCLASS=&SSMMCLAS,
               // MSGLEVEL=(0,0)

       J2 ===> //&ZUSER.2 JOB (&SSMACCT),''&ZUSER'',
               // CLASS=&SSMCLASS,MSGCLASS=&SSMMCLAS,
               // MSGLEVEL=(0,0)

       J3 ===> //&ZUSER.3 JOB (&SSMACCT),''&ZUSER'',
               // CLASS=&SSMCLASS,MSGCLASS=&SSMMCLAS,
               // MSGLEVEL=(0,0)

       J4 ===> //&ZUSER.4 JOB (&SSMACCT),''&ZUSER'',
               // CLASS=&SSMCLASS,MSGCLASS=&SSMMCLAS,
               // MSGLEVEL=(0,0)

       J5 ===> //&ZUSER.5 JOB (&SSMACCT),''&ZUSER'',
               // CLASS=&SSMCLASS,MSGCLASS=&SSMMCLAS,
               // MSGLEVEL=(0,0)
 ENTER CHANGES or END to EXIT
```

OVERRIDE	
J1	
J2	
J3	
J4	
J5	

Figure 4-18. APS Generator Options

```
-------------------------  APS Generator Options  ----------------------------
OPTION  ===> 

  OVERRIDE ===>
 TARGET OS ===>        (MVS, VSE, OS400)
        DC ===>        (IMS, CICS, DLG, DDS, MVS, or ISPF (Prototyper))
        DB ===>        (IMS, DLI, VSAM, IDMS, OS4)
       SQL ===>        (Blank, SQLDS, DB2, SQL400)

 Job Class ===>                 Job Dest ===>
 Msg Class ===>            Cardin Member ===>
                       Generate COBOL-II ===>          (Yes or No)
   Listgen ===>          COBOL Compiler  ===>          (2,3)  (1,2,3)
     COBOL ===>             1 - OS/VS COBOL
    Object ===>             2 - COBOL-II
   MFS/BMS ===>             3 - COBOL for MVS
    Gensrc ===>

 User Help ===>             CICS Release ===>          (Blank, A or B)
                             IMS Release ===>          (Blank, A or B)
                                   SUPRA ===>          (Yes or No)
  APS Parm ===>
COBOL Parm ===>
```

OVERRIDE			
TARGET OS			
DC			
DB			
SQL			
Job Class		Job Dest	
Msg Class		Cardin Member	
		Generate COBOL-II	
Listgen		COBOL Compiler	
COBOL			
Object			
MFS/BMS			
Gensrc			
User Help		CICS Release	
		IMS Release	
		SUPRA	
APS Parm			
COBOL Parm			

Figure 4-19. APS International Options

```
----------------------  APS International Options  -------------------

 DBCS        ===>            ( Yes, No )
 Language    ===>            ( Default is ENGLISH )


 Currency Sign  ===>         ( Default is $ )
                             ( Use 'Y' or '\' for Japanese YEN )

 Decimal Point  ===>         ( Period or Comma )
```

DBCS	
Language	
Currency Sign	
Decimal Point	

Figure 4-20. APS Precompiler Parameters

```
------------------------  APS Precompiler Options  --------------------------
OPTION  ===>

      APOST ===>            LANG=SCB ===>             XLATE=ALL ===>
      QUOTE ===>               COBOL ===>                   FMP ===>
   SCBTRACE ===>                 JCL ===>                   RED ===>
        RWT ===>                TEXT ===>                   RWT ===>
                                                            SCB ===>
  MOCKUPFMP ===>
       SUBR ===>           SEQ=COBOL ===>        SYNTAX=COBOLII ===>
     NARROW ===>              RECORD ===>               S-COBOL ===>
   EVALMESS ===>          IDENTIFIER ===>
                                                  EMARK=QUESTIONS ===>
     GENSEQ ===>                                          DOLLARS ===>
   SPACESEQ ===>                                    3-CHAR STRING ===>
   GENIDENT ===>         MAIN=MAININ ===>
 SPACEIDENT ===>            INSTREAM ===>            IDENT=PGMID ===>
                         MEMBER NAME ===>
        FMP ===>
     SOURCE ===>
  GENDIRECT ===>
 GENCOMMENT ===>
  USERNAMES ===>
   APS Parm ===>
```

APOST		LANG=SCB		XLATE=ALL	
QUOTE		COBOL		FMP	
SCBTRACE		JCL		RED	
RWT		TEXT		RNT	
				SCB	
MOCKUPFMP					
SUBR		SEQ=COBOL		SYNTAX=COBOLII	
NARROW		RECORD		S-COBOL	
EVALMESS		IDENTIFIER			
			EMARK=QUESTIONS		
GENSEQQ				DOLLARS	
SPACESEQ				3-CHAR STRING	
GENIDENT		MAIN=MAININ			
SPACEIDENT		INSTREAM		IDENT=PGMID	
		MEMBER NAME			
FMP					

SOURCE	
GENDIRECT	
GENCOMMENT	
USERNAMES	
APS Parm	

Figure 4-21. APS Report Generator Options Defaults

```
------------------  APS Report Generator Options Defaults  --------------------
OPTION  ===>

OVERRIDE ===>


     For Report Mock-up Report (RP01)

         Line numbers required?   ===>     ( Yes or No )


     For Screen Hardcopy Report (SC01)

          Left justify Report     ===>     ( Yes or No )

          Field Attributes Report ===>     ( Yes or No )

          Field Edits Report      ===>     ( Yes or No )
```

OVERRIDE	
For Report Mock-up Report (RP01)	
Line numbers required?	
For Screen Hardcopy Report (SC01)	
Left justify Report	
Field Attributes Reports	
Field Edits Report	

Figure 4-22. PL/I Environments

```
---------------------------  PL/I Environments  ----------------------------
OPTION  ===> 

  PL/I:

        Runtime/Link Library ===>

 Are PL/I Libraries in LINKLIST/LPA ? ===>      ( Yes or No )
```

PL/I: Runtime/Link Library	
Are PL/I Libraries in LINKLIST/LPA?	

B Reference

This appendix contains reference information you need to install APS for z/OS.

APS@PROC CLIST

You execute the APS@PROC CLIST to install the APS ISPF panels that support APS components and APS program generation. The APS ISPF panels consist of an APS Main Menu panel and other APS-supplied ISPF panels. When you execute the APS@PROC CLIST, you are prompted for the information you supplied on the Pre-Installation Checklist for concatenating the APS libraries to your ISPF libraries.

The APS@PROC CLIST builds:

- A project-related CLIST in the &DSNPRE.CLIST data set APS5000
- A logon PROC named APS5000 in the &DSNPRE.ISPSLIB
- An ISPF panel named APS5000 in &DSNPRE.GENPANEL

Install APS@PROC as follows.

1. Copy the unloaded &APSPRE.CLIST(APS40SYS) and rename it APS5000 in your TSO system CLIST library.
2. Execute the APS@PROC CLIST.
3. After the APS@PROC CLIST has successfully executed, optionally copy the logon PROC, &DSNPRE.ISPSLIB(APS5000) to your system PROCLIB.

The location of APS5000 determines the value of the REALLOC keyword, and vice versa, as follows.

If APS5000 resides in	The REALLOC keyword is set to
Logon Proclib	LOGON
System CLIST Library	YES
&DSNPRE.CLIST	NO

The keyword is set to LOGON (initial mode) when it is invoked from the APS 5000 logon PROC you copied to the system PROCLIB for each project. When the keyword is set to LOGON, the APS5000 CLIST reallocates only the ISPF profile library, because the APS work files, PDSs, and ISPF libraries are allocated in the APS5000 logon PROC.

When the REALLOC keyword is set to YES, APS work files, PDSs, and ISPF libraries, including the profile dataset (ISPPROF), are allocated. When the REALLOC keyword is set to NO, no data sets are allocated; it is assumed that they were allocated when you logged onto APS through the logon PROC or the APS5000 CLIST in the system library. Thus, having gone back to READY after being in APS, you can get back into APS quickly (without reallocating datasets) by executing %APS5000.

To customize any of the above CLISTs or the logon PROC for a project, edit the corresponding file tailoring skeleton listed below before (re)executing APS@PROC for that project.

To customize	Edit
&DSNPRE.CLIST (APS5000)	&APSPRE.ISPSLIB (APS@CMD)
&DSNPRE.ISPSLIB (APS5000)	&APSPRE.ISPSLIB (APS@LGN)
&DSNPRE.GENPANEL (APS5000)	&APSPRE.ISPLIB (APS@PAN)

For example, if you want to change the concatenation order of the data sets allocated by APS, edit &APSPRE.ISPSLIB(APS@CMD) and &APSPRE.ISPSLIB(APS@LGN), and then re-execute APS@PROC.

Note: If any data sets on a *ddname* are VB, the first data set in the concatenation list must also be VB. The first data set must have the largest blocksize. Failure to follow these rules results in an 0C4 abend.

The APS5000 CLIST allocates APS work files and PDSs along with ISPF libraries. It then calls A2INIT00.

Note: You need to rebuild the APS5000 CLIST, panels, and logon PROC after you install APS and run the BUILD option from the APS Install Menu. Do this by selecting option 2 on the APS Project Dataset Configuration screen.

Access the Project Dataset Configuration screen as follows.

1. On the APS Main Menu, enter **4.2.1** in the Command field. The APS Administration screen displays.
2. On the APS Administration screen, select option **3**, Project Dataset Configuration. The Project Dataset Configuration screen displays.

   Caution: If you re-execute the APS@PROC CLIST, instead of using the Project Dataset Configuration option, the CLIST resets all values to the APS default values.

Overriding APS Default Values

APS@PROC calls A2INIT00, which brings up the APS@INST panel named APS5000 INSTALL MENU. From this panel, you can change the APS default values and the APS-supplied job cards.

1. Select each option on the APS5000 MENU that applies to your site and change the APS default values as desired. In particular, note that Option 10 - APS OPTIONS allows access to the following option override screens.
   - APS BIND Options
   - APS IDMS Options
   - APS Job Control Cards
   - APS Generator Options
   - APS Precompiler Options
   - APS Report Generator Options

For more information about the option screens, see the APS ***User's Guide*** chapter *Generate the Application*.

2 Set the Override field on each screen to **Yes**. If any information is entered incorrectly, all fields automatically change to No. If the override field contains No, the APS-supplied defaults are used.

3 Change the supplied job cards J1 through J5. Option J - APS JOB CARDS displays the APS Job Control Cards screen.

The CLEAR option on this panel changes J1 through J5 to nulls. The SET option initializes J1 through J5 to the APS-supplied default values.

If you enter the following for J1

```
J1 ===> //&ZUSER.1 JOB (&SSMACCT),''&ZUSER'',
        // CLASS=&SSMCLASS, MSGCLASS=&SSMMCLAS,
        // MSGLEVEL=(0,0)
```

The job cards produced looks like this

```
//userid1 JOB  (9999),'userid',
// CLASS=A,MSGCLASS=X,
// MSGLEVEL=(0,0)
```

4 Select Option **B** (build) on the APS5000 INSTALL MENU to display the APS@INST CLIST. This CLIST builds the following data sets.

- APS5000 CLIST
- APS5000 Logon Proc
- APS5000 Panel (sets up default values for the APS PROFILE POOL)

  The Build option validates the information from the other APS Install screens. If an error is found, the short message in the upper right corner of the screen explains which option to check. When this happens, enter HELP or press PF1 to display the associated long message.

5 Enter **END** on the APS@INST panel. Control returns to APS@PROC, which invokes the APS5000 CLIST just built with the B(uild) Option.

6 APSMENU and APS5000 panels can be invoked from APS5000.

Reinstalling the Subschema Utilities

If you are upgrading your DB2 release or upgrading an existing release of APS and want to share your existing subschemas with the new release, follow these steps:

Note: If you are upgrading from an APS release prior to version 2.1.00, see the APS Technical bulletin ***Installing APS for MVS SQL Suschema Utilities*** in the Micro Focus SupportNet Knowledgebase.

---

1. Make a pre-installation check list. See *Pre-Installation Checklist*.
2. Copy your previous job card member from the old &APSPRE.ISPSLIB to the new &APSPRE.ISPSLIB.
3. Perform *Step 1. Build Profile Variables*.

Note: You must change the standard plan prefix name to avoid affecting the currently installed version of the utilities.

---

4. Perform *Step 2. Link the Utilities*.
5. To rebind the APS Dynamic SQL processor, A1DPUTL, edit the data set &APSPRE.ISPSLIB(DB2SDYNM). Follow the directions for job card modification in DB2SDYNM.
6. Submit the job for execution.
7. Rebind the APS/SQL Subschema Utilities system software using the DB2SBIND member in &APSPRE.ISPSLIB.
8. If the plan prefix is changed, you can grant authorization for the new plans. Use the DB2SGRNT member in &ASPRE.ISPSLIB to execute grants for the Subschema Utilities. If using the EXPLAIN facility, perform *Step 8. Link EXPLAIN* and *Step 9. Bind EXPLAIN*.

APS for z/OS Data Set Descriptions

Project Level Data Sets

Data Set Name	RECFM	LRECL	BLKSZ	Description
&DSNPRE.ACBLIB	U	0	6144	IMS ACB Library
&DSNPRE.AMSERV	FB	80	3120	Generated IDCAMS Source
&DSNPRE.APRAPPL	FB	80	3120	APSAPPL Application Static Data
&DSNPRE.APRPROG	FB	80	3120	APSPROG Program Static Data
&DSNPRE.APSSRC	FB	80	6160	APS Source Programs
&DSNPRE.APSAPPL	FB	80	6160	Painted Application Definitions
&DSNPRE.APSCNIO	FB	80	6160	Painted Scenarios
&DSNPRE.APSCNDT	FB	1	603040	Painted Scenarios
&DSNPRE.APSDATA	FB	80	6160	Painted Data Structures
&DSNPRE.APSDE	FB	240	6000	Data Element Library
&DSNPRE.APSEXPS	FB	80	6160	Online Express Save File
&DSNPRE.APSPROG	FB	80	6160	Painted Programs
&DSNPRE.APSREPT	FB	240	6000	Painted Report Mockups
&DSNPRE.APSSCFE	FB	80	3120	Field Edit Selection List
&DSNPRE.APSSCRN	FB	240	6000	Painted Screens
&DSNPRE.CLIST	FB	80	3120	User Customized CLISTs
&DSNPRE.CNTL	FB	80	3120	User Customized Control Cards
&DSNPRE.COBCICS	FB	80	6160	Generated COBOL (CICS programs)
&DSNPRE.COBPCCIC	FB	80	6160	Generated COBOL (CICS programs for PC)
&DSNPRE.COBPCIMS	FB	80	6160	Generated COBOL (IMS programs for PC)
&DSNPRE.COBIMS	FB	80	6160	Generated COBOL (IMS programs)
&DSNPRE.COBISPF	FB	80	6160	Generated COBOL (ISPF programs)
&DSNPRE.COBMVS	FB	80	6160	Generated COBOL (batch programs)
&DSNPRE.COBPC	FB	80	6160	Generated COBOL (batch for PC)
&DSNPRE.COPYLIB	FB	80	3120	COPYBOOKS
&DSNPRE.DBDLIB	U	0	6144	DBD Load Library

Data Set Name	RECFM	LRECL	BLKSZ	Description
&DSNPRE.DBDSRC	FB	80	3120	DBD Source Library
&DSNPRE.DBRMLIB	FB	80	6160	DB2 DBRMLIB
&DSNPRE.DDIBKUP	FB	*23*	85950	Backup for DDIFILE
&DSNPRE.DDISRC	FB	80	3120	DDI Input Records
&DSNPRE.DDISYMB	FB	80	3120	Generated Database Macro Symbols
&DSNPRE.GEN5DLG	VB	*136*	3132	Generated ISPF Dialog panels (MOD5)
&DSNPRE.GENBMS	FB	80	3120	Generated BMS Source
&DSNPRE.GENDLG	FB	80	3120	Generated ISPF Dialog panels
&DSNPRE.GENPCBMS	FB	80	3120	Generated BMS Source for PC
&DSNPRE.GENPCMFS	FB	80	3120	Generated MFS Source for PC
&DSNPRE.GENMFS	FB	80	3120	Generated MFS Source
&DSNPRE.GENPANEL	FB	80	6160	Generated ISPF prototype panels
&DSNPRE.GENSRC	FB	80	3120	Generated S-COBOL programs
&DSNPRE.GEN5PANL	VB	*136*	3132	Generated ISPF prototype panels (MOD5)
&DSNPRE.ISPSLIB	FB	80	3120	User Customized Procedure (skeletons)
&DSNPRE.LOADCICS	U	0	6144	CICS Load Library
&DSNPRE.LOADDLG	U	0	6144	ISPF Dialog Load Library
&DSNPRE.LOADIMS	U	0	6144	IMS Load Library
&DSNPRE.LOADISPF	U	0	6144	ISPF prototype Load Library
&DSNPRE.LOADMVS	U	0	6144	BATCH Load Library
&DSNPRE.OBJCICS	FB	80	3200	CICS Object Modules
&DSNPRE.OBJDLG	FB	80	3200	ISFP Dialog Object Modules
&DSNPRE.OBJIMS	FB	80	3200	IMS Object Modules
&DSNPRE.OBJISPF	FB	80	3200	ISPF prototype Object Modules
&DSNPRE.OBJMVS	FB	80	3200	BATCH Object Modules
&DSNPRE.PSBLIB	U	0	6144	PSB Load Library
&DSNPRE.PSBSRC	FB	80	3120	PSB Source Library
&DSNPRE.SCRCOPY	FB	81	6156	Screen Documentation
&DSNPRE.SCRSYMB	FB	80	6160	Generated Screen Macro Symbols
&DSNPRE.TFORMAT	U	0	6144	IMS Format Library
&DSNPRE.USERMACS	FB	80	6160	User Written Macros
&SYSUID.USER.CLIST	FB	80	3120	User CLISTs (optional)

Data Set Name	RECFM	LRECL	BLKSZ	Description
&SYSUID.ISPF.ISPPROF	FB	80	3120	User Profile (default name)

B.3.2 DDIFILE Data Set

Data Set Name	RECFM	LRECL	BLKSZ	Description
&DDIPRE.DDIFILE	*KSDSD*	RECSZ	238	DDI VSAM FILE

B.3.3 PDS Names and Descriptions

Data Set Name	RECFM	LRECL	BLKSZ	Description
&APSPRE.APSMACS	FB	80	6160	APS Supplied DB/DC Macros
&APSPRE.CLIST	FB	80	3120	APS CLISTs
&APSPRE.CNTL	FB	80	3120	APS Control Records
&APSPRE.COPYLIB	FB	80	3120	APS/SQL Repository Copybooks
&APSPRE.DBRMLIB2	FB	80	6160	DB2 Request Modules
&APSPRE.ISPLLIB2	U	0	6144	APS ISPF Programs compiled with COBOL for MVS
&APSPRE.ISPMLIB	FB	80	3120	APS ISPF Message Library
&APSPRE.ISPPLIB	FB	80	3120	APS ISPF Panels (no HELP panels)
&APSPRE.ISPPLIBH	FB	80	3120	APS ISPF Panels (HELP panels only)
&APSPRE.ISPPLIBX	FB	80	3120	APS pre-processed Panels (user selected)
&APSPRE.ISPSLIB	FB	80	3120	APS ISPF File Tailoring skeletons (JCL)
&APSPRE.ISPTLIB	FB	80	3120	APS ISPF Command Tables
&APSPRE.LINKLST	U	0	6144	Selected APS modules which would need to be copied to LINKLST if ISPLLIB2/LOADLIB2 were in the (E)PLA and all APS ISPPLIB/STEPLIBs were removed
&APSPRE.LOADLIB2	U	0	6144	APS Batch Programs compiled with COBOL for MVS
&APSPRE.OBJECT2	FB	80	3200	APS/SQL Object Modules compiled with COBOL for MVS (may be archived/deleted after install)

Data Set Name	RECFM	LRECL	BLKSZ	Description
&&AUTHMOD	U	0	6144	SITE/CPU Authorization Module copied into LOADLIB, ISPLLIB and LINKLST and deleted
&&AUTHKEY	FB	80	3120	SITE/CPU Authorization Module Source copied into CNTL and deleted
&&OBJECT2	FB	80	3200	APSCOMP Pre-Compiler Object compiled with COBOL for MVS linked into LOADLIB2 and deleted

APS/SQL Common Data Area Tables

COLM06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
COLM_NAME	CHAR(18)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATU	SCHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL

Column Name	Type	Nulls
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
SEQNO	SMALLINT	NOT NULL
TABL_OR_VIEW_IND	CHAR(1)	NOT NULL
BASED_ON_TYPE	CHAR(1)	NOT NULL
COLR_HLQID	SMALLINT	NOT NULL
COLR_NAME	CHAR(45)	NOT NULL
COLR_TYPE	CHAR(2)	NOT NULL
COLR_OCCNO	SMALLINT	NOT NULL
DEFAULT_PDAT_EXIST	CHAR(1)	NOT NULL
DEFAULT_PDAT_HLQID	SMALLINT	NOT NULL
DEFAULT_PDAT_NAME	CHAR(31)	NOT NULL
DEFAULT_PDAT_OCCNO	SMALLINT	NOT NULL

COLR06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
COLR_NAME	CHAR(45)	NOT NULL
COLR_TYPE	CHAR(2)	NOT NULL
COLR_OCCNO	SMALLINT	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL

Column Name	Type	Nulls
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
COLR_NAME_TYPE	CHAR(1)	NOT NULL
COLM_HLQID	SMALLINT	NOT NULL
COLM_NAME	CHAR(18)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
DEF_FOR_COLR_TYPE	CHAR(1)	NOT NULL
COLR_OVERRIDABLE	CHAR(1)	NOT NULL
DEFAULT_PDAT_EXIST	CHAR(1)	NOT NULL
DEFAULT_PDAT_HLQID	SMALLINT	NOT NULL
DEFAULT_PDAT_NAME	CHAR(31)	NOT NULL
DEFAULT_PDAT_OCCNO	SMALLINT	NOT NULL
COLTYPE	CHAR(8)	NOT NULL
COLM_LENGTH	SMALLINT	NOT NULL
DECIMAL_PLACES	SMALLINT	NOT NULL
COLNUL	CHAR(1)	NOT NULL
DEFAULT	CHAR(1)	NOT NULL
FLDPROC	CHAR(8)	NOT NULL
LABELON	CHAR(30)	NOT NULL
BITDATA	CHAR(1)	NOT NULL W/DEFAULT

DBSE06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
DBSE_NAME	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL

Column Name	Type	Nulls
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
DBSE_CREATOR	CHAR(8)	NOT NULL
STGP_NAME	CHAR(8)	NOT NULL
BPOOL	CHAR(8)	NOT NULL

INDX06 Table Description

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
INDX_NAME	CHAR(18)	NOT NULL
INDX_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL

Column Name	Type	Nulls
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
UNIQUERULE	CHAR(1)	NOT NULL
CLUSTERING	CHAR(1)	NOT NULL
BPOOL	CHAR(8)	NOT NULL
PGSIZE	SMALLINT	NOT NULL
ERASERULE	CHAR(1)	NOT NULL
DSETPASS	CHAR(8)	NOT NULL
CLOSERULE	CHAR(1)	NOT NULL

INDXCOLM06 Table Description

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
INDX_NAME	CHAR(18)	NOT NULL
INDX_CREATOR	CHAR(8)	NOT NULL
COLM_NAME	CHAR(18)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL

Column Name	Type	Nulls
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
SEQNO	SMALLINT	NOT NULL
ORDERING	CHAR(1)	NOT NULL

IXPT06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
INDX_PARTITION	SMALLINT	NOT NULL
INDX_NAME	CHAR(18)	NOT NULL
INDX_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL

Column Name	Type	Nulls
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
PQTY	INTEGER	NOT NULL
SQTY	SMALLINT	NOT NULL
STORETYPE	CHAR(1)	NOT NULL
STGP_NAME	CHAR(8)	NOT NULL
VCATNAME	CHAR(8)	NOT NULL
FREEPAGE	SMALLINT	NOT NULL
PCTFREE	SMALLINT	NOT NULL
LIMITKEY	VARCHAR(512)	NOT NULL

LDAT06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
LDAT_NAME	CHAR(45)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
ELEMENT_STRUCT_IND	CHAR(1)	NOT NULL

Column Name	Type	Nulls
USRVW_DATA_ENT_IND	CHAR(1)	NOT NULL
USER_VIEW_SUBTYPE	CHAR(2)	NOT NULL

LDATTABL06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
LDAT_NAME	CHAR(45)	NOT NULL
TABL_HLQID	SMALLINT	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
DEFAULT_LDAT_IND	CHAR(1)	NOT NULL
USE_UNDER_CONDX	CHAR(40)	NOT NULL

LDATCOLM06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
LDAT_NAME	CHAR(45)	NOT NULL
COLM_HLQID	SMALLINT	NOT NULL
COLM_NAME	CHAR(18)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
DEFAULT_LDAT_IND	CHAR(1)	NOT NULL
USE_UNDER_CONDX	CHAR(40)	NOT NULL

LDEL06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
LDEL_NAME	CHAR(45)	NOT NULL
CANONICAL_LENGTH	CHAR(5)	NOT NULL
CANONICAL_FORMAT	CHAR(6)	NOT NULL

Column Name	Type	Nulls
PROMPT	CHAR(80)	NOT NULL
HEADER_NEWLN_DELIM	CHAR(1)	NOT NULL
SHORT_HEADER	CHAR(32)	NOT NULL
HEADER	CHAR(64)	NOT NULL
LONG_HEADER	CHAR(132)	NOT NULL

PDB2TXAD06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TABLE_ID	SMALLINT	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
TEXT_TYPE	CHAR(2)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
WHERE_STORED_IND	CHAR(1)	NOT NULL
TEXT_TABLE	CHAR(2)	NOT NULL
TEXT_LRECL	SMALLINT	NOT NULL
TEXT_DSN	CHAR(44)	NOT NULL
TEXT_MEMBER	CHAR(8)	NOT NULL

PDB2TX0006 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TABLE_ID	SMALLINT	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
TEXT_TYPE	CHAR(2)	NOT NULL

Column Name	Type	Nulls
SEQNO	SMALLINT	NOT NULL
TEXT_LINE	VARCHAR(254)	NOT NULL

PDB2CHGM06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TABLE_ID	SMALLINT	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ACTION_TYPE	CHAR(2)	NOT NULL
ACTION_TYPE_DETAIL	CHAR(2)	NOT NULL
ACTION_DATE	CHAR(6)	NOT NULL
ACTION_TIME	CHAR(6)	NOT NULL
TEXT_TYPE	CHAR(2)	NOT NULL
ACTION_BY_ID	CHAR(8)	NOT NULL
ACTION_BY_PROCESS	CHAR(8)	NOT NULL
SOURCE_ENTITY_TYPE	CHAR(4)	NOT NULL
SOURCE_ENTITY_PDS	CHAR(44)	NOT NULL
SOURCE_ENTITY_NAME	CHAR(8)	NOT NULL
SOURCE_ENTITY_VMOD	CHAR(4)	NOT NULL
WHERE_STORED_IND	CHAR(1)	NOT NULL
TEXT_TABLE	CHAR(2)	NOT NULL
TEXT_LRECL	SMALLINT	NOT NULL
TEXT_DSN	CHAR(44)	NOT NULL
TEXT_MEMBER	CHAR(8)	NOT NULL
REASON_FOR_ACTION	CHAR(20)	NOT NULL
ACTION_MGMT_ID	CHAR(20)	NOT NULL

PDB2CM0006 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TABLE_ID	SMALLINT	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ACTION_TYPE	CHAR(2)	NOT NULL
ACTION_TYPE_DETAIL	CHAR(2)	NOT NULL
ACTION_DATE	CHAR(6)	NOT NULL
ACTION_TIME	CHAR(6)	NOT NULL
TEXT_TYPE	CHAR(2)	NOT NULL
SEQNO	SMALLINT	NOT NULL
TEXT_LINE	VARCHAR(254)	NOT NULL

STGP06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
STGP_NAME	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL

Column Name	Type	Nulls
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
VCATNAME	CHAR(8)	NOT NULL
VPASSWORD	CHAR(8)	NOT NULL

STGV06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
STGP_NAME	CHAR(8)	NOT NULL
VOLUME_ID	CHAR(6)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL

TBSP06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TBSP_NAME	CHAR(8)	NOT NULL
DBSE_NAME	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
TBSP_CREATOR	CHAR(8)	NOT NULL
BPOOL	CHAR(8)	NOT NULL
PARTITIONS	SMALLINT	NOT NULL
LOCKRULE	CHAR(1)	NOT NULL
ERASERULE	CHAR(1)	NOT NULL
DSETPASS	CHAR(8)	NOT NULL
CLOSERULE	CHAR(1)	NOT NULL
SEGSIZE	SMALLINIT	NOT NULL W/DEFAULT

TSPT06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TBSP_PARTITION	SMALLINT	NOT NULL
TBSP_NAME	CHAR(8)	NOT NULL
DBSE_NAME	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
INDX_NAME	CHAR(18)	NOT NULL
INDX_CREATOR	CHAR(8)	NOT NULL
PQTY	INTEGER	NOT NULL
SQTY	SMALLINT	NOT NULL
STORETYPE	CHAR(1)	NOT NULL
STGP_NAME	CHAR(8)	NOT NULL
VCATNAME	CHAR(8)	NOT NULL
FREEPAGE	SMALLINT	NOT NULL
PCTFREE	SMALLINT	NOT NULL

TABL06 Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
TABL_OR_VIEW_IND	CHAR(1)	NOT NULL
DBSE_NAME	CHAR(8)	NOT NULL
TBSP_NAME	CHAR(8)	NOT NULL
EDTPROC	CHAR(8)	NOT NULL
VALPROC	CHAR(8)	NOT NULL
LABELON	CHAR(30)	NOT NULL
CHECK	CHAR(1)	NOT NULL
INIT_NUM_ROWS	INTEGER	NOT NULL
FINAL_NUM_ROWS	INTEGER	NOT NULL
AUDITING	CHAR(1)	NOT NULL
LOCATION	CHAR(16)	NOT NULL
TBCREATOR	CHAR(8)	NOT NULL
TBNAME	CHAR(18)	NOT NULL

TABL06 Table/View Relationship Description

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
VIEW_NAME	CHAR(18)	NOT NULL
VIEW_CREATOR	CHAR(8)	NOT NULL
TABL_HLQID	SMALLINT	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
CORRELATION_NAME	CHAR(18)	NOT NULL

SCHM06 Subschema Table

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	
SCHM_NAME	CHAR(8)	
INTERNAL_ID	FLOAT	

Column Name	Type	Nulls
ALIAS_INDICATOR	CHAR(1)	
ALIAS_INT_ID	FLOAT	
LOCKED_STATUS	CHAR(1)	
CREATED_DATE	CHAR(6)	
CREATED_TIME	CHAR(6)	
CREATED_BY_ID	CHAR(8)	
LST_CHG_DATE	CHAR(6)	
LST_CHG_TIME	CHAR(6)	
LST_CHG_BY_ID	CHAR(8)	
OWNER	CHAR(8)	
QUALITY_INDICATOR	CHAR(2)	
LIFE_CYCLE_PHASE	CHAR(2)	
BRIEF_DESCRIPTION	CHAR(60)	
TABL_CREATOR_OV	CHAR(8)	

SCHMTABL06 Subschema Table/View Relationship

Column Name	Type	Nulls
HIGH_LEVEL_QUAL_ID	SMALLINT	NOT NULL
SCHM_NAME	CHAR(8)	NOT NULL
TABL_NAME	CHAR(18)	NOT NULL
TABL_CREATOR	CHAR(8)	NOT NULL
INTERNAL_ID	FLOAT	NOT NULL
ALIAS_INDICATOR	CHAR(1)	NOT NULL
ALIAS_INT_ID	FLOAT	NOT NULL
LOCKED_STATUS	CHAR(1)	NOT NULL
CREATED_DATE	CHAR(6)	NOT NULL
CREATED_TIME	CHAR(6)	NOT NULL
CREATED_BY_ID	CHAR(8)	NOT NULL
LST_CHG_DATE	CHAR(6)	NOT NULL

Column Name	Type	Nulls
LST_CHG_TIME	CHAR(6)	NOT NULL
LST_CHG_BY_ID	CHAR(8)	NOT NULL
OWNER	CHAR(8)	NOT NULL
QUALITY_INDICATOR	CHAR(2)	NOT NULL
LIFE_CYCLE_PHASE	CHAR(2)	NOT NULL
BRIEF_DESCRIPTION	CHAR(60)	NOT NULL
SEQNO	SMALLINT	NOT NULL
COPY_NAME	CHAR(8)	NOT NULL

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