

ADL Online Services

This chapter covers the following topics:

- Introduction
 - Main Menu
 - Maintaining the ADL Interfaces under CICS
 - ADL Directory Management Facility
 - Consistency DBD Maintenance
 - Maintenance of the Rolled-out PSBs
 - Maintenance of Checkpoints
 - Messages and Codes Retrieval
-

Introduction

The ADL Online Services provides services which are used:

- to maintain the ADL Interfaces under CICS,
- to report the contents of the ADL directory file, in particular the DBD and PSB control blocks,
- to assign DBDs for the ADL Consistency Interface,
- to handle the rolled-out PSBs for CICS or IMS/TP,
- to maintain the checkpoints stored in the directory,
- to retrieve ADL messages and codes.

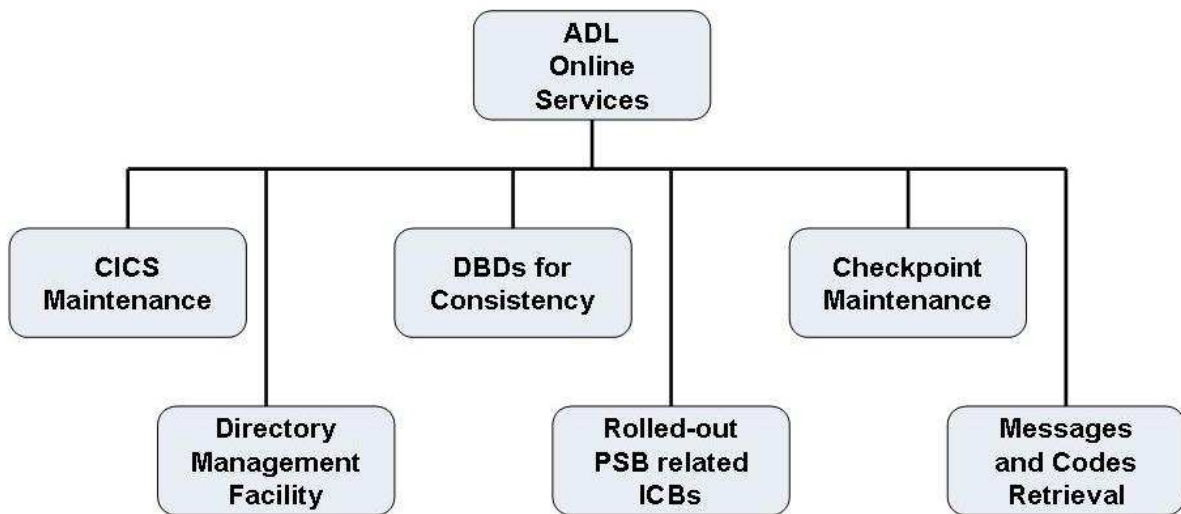


Figure 1: ADL Online Service Main Functions

Each of these services is selectable from the Main Menu of the ADL Online Services, and the following sections describe them in detail. Note that the service "CICS Maintenance" is only of interest if you are running ADL in a CICS environment, and the service "Rolled-out PSB related ICBs" is only of interest if you are running in a CICS environment or under IMS/TP. The service "DBDs for Consistency" is only of interest if Natural or Adabas direct call programs are modifying the migrated data.

Prerequisites

The ADL Online Services is an online application written in Natural. Therefore it can only be accessed if Natural is available on your site. Furthermore, the service "Maintenance of the ADL Interfaces under CICS" can only be used if the ADL Online Services are installed in the same CICS as the ADL Interfaces. The main functions under CICS, however, can also be performed from Assembler applications. Refer to the section *CICS Installation and Operation* in this documentation for more information on the ADL functions under CICS.

In order to access the ADL Directory file, the ADL Online Services must be aware of the DBID and the file number of the ADL Directory file. You have to specify the following Natural parameter:

```
LFILE=(207,dbid,fnr)
```

where *dbid* and *fnr* are the database ID and file number of the ADL Directory file. The LFILE parameter is described in detail in the *Natural Parameter Reference* documentation. If the LFILE parameter is not defined, The ADL Online Services will display the following message at startup:

```
Warning: No Natural LFILE parameter for ADL directory!
```

In this case, you must specify the DBID and file number of the ADL Directory file in the Main Menu, as described later.

Starting the ADL Online Services

The programs of the ADL Online Services are stored on the SYSADL library. To start the application, enter the following statements:

```
LOGON SYSADL MENU
```

Terminating the ADL Online Services

To terminate the session, press the PF3, PF12 or CLEAR key in the Main Menu, or select the code "." in the Main Menu.

Online Help

For each menu of the ADL Online Services there is a help facility available. Press the PF1 key to access the help information corresponding to the current screen.

General Key Assignments

If not otherwise stated, the following general key assignments are valid for all of the screens in the ADL Online Services:

Key	Value	Meaning
PF1	Help	Display online help for the current screen.
PF3	Exit	Save modifications, if any, and return to previous screen.
PF7	Prev	Scroll to previous page.
PF8	Next	Scroll to next page.
PF10	Top	Scroll to first page.
PF11	Bot	Scroll to last page.
PF12	Can	As PF3, but modifications are not saved.
PF15	Menu	Save modifications, if any, and return to the Main Menu.
Clear		As PF15, but modifications are not saved.

General Map Elements

Every screen of the ADL Online Services contains the following elements:

- Current date and time.
- ADL Online Services version.
- DBID and file number of the ADL directory.
- Name of the active function.

- Name of current map.

Note that in the CICS Maintenance the ADL Online Services version and DBID/FNR displayed are those of the ADL nucleus rather than those of the Natural environment currently used.

Main Menu

When you start the ADL Online Services, the following menu is displayed:

```

10:55:01          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802          - Main Menu -          MENU---M

      Code  Function                                     ADL Directory
-----  -----
      A    DBDs for Consistency (ADABAS)             DBID:  1424
      C    CICS Maintenance                          FNR :   802
      D    Directory Management Facility             -----
      M    Messages and Codes Retrieval
      R    Rolled-out PSB-related ICBs
      V    ADL Version and Correction Status
      X    Checkpoint Maintenance
      ?    Help
      .    Terminate Session
-----  -----

Code:

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                               Can
    
```

In the Main Menu you can select which of the ADL online service you want to use. The functions provided are described below in details. Additionally you can specify the DBID and file number of the ADL directory. The DBID/FNR specified will be used in all services; solely the CICS Maintenance uses the DBID and file number of the ADL CICS nucleus.

The Main Menu provides the following functions:

Code	Function
A	DBDs for the ADL Consistency Interface. You can list and modify the status of all converted physical databases.
C	CICS Maintenance. The current status of the ADL Interfaces and of the ADL trace facility is outlined together with some system information. You can start and stop the ADL Interfaces, switch the ADL trace facility on and off, list the ADL PSB table for CICS, list the ADL zap status and write the ADL tables to the CICS dump file.
D	Directory Management Facility. You can list the DBDs and PSBs of the ADL Directory file. The segment and field definitions are outlined together with their corresponding Adabas definitions. There is also a function which supplies you with a detailed list of information of each external control block.
M	Messages and Codes Retrieval. You can display the full ADL error message text corresponding to ADL error numbers. Also, the ADL abend codes and the DL/I status codes can be retrieved.
R	Rolled-out PSB-related ICBs. You can list the PSBs and corresponding environments, and delete unused PSBs.
X	Checkpoint Maintenance. You can list and delete checkpoints of programs which terminated abnormally.
?	Online Help.
.	Terminate the ADL Online Services.

To terminate the session, press either PF3 or PF12 or the Clear key.

Maintaining the ADL Interfaces under CICS

This service is reached by selecting code C in the Main Menu, and allows you to maintain the ADL Interfaces under CICS.

```

10:57:37          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
1424 / 802          - CICS Maintenance -          ADLCICSM

CALLDLI Interface ..... Off          Terminal ID .... TCG7
Consistency Interface .. Off          Routine Trace .. Off
DL/I in System .....              Call Trace ..... Off
CICS Level ..... 0640              Trace Term ID ..

          Functions :

          _ Switch ADL Interfaces on
          _ Switch Trace Facility on
          _ List CICS PSB Table
          _ List ADL Zap Status
          _ Dump ADL Tables

Mark the requested function(s).

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit  ADL   Trace PSBs          Zaps          Can
    
```

The screen for this service displays the DBID and file number of the ADL Directory file as defined in the parameter module of the ADL CICS nucleus. The version of the ADL CICS nucleus is also displayed. These values may therefore differ from those displayed in other screens of the ADL Online Services.

The screen informs you about the status of the ADL Interfaces. The ADL CALLDLI Interface can be in any one of the following states:

Status	Description
Off	The ADL CALLDLI Interface is not active. All DL/I requests are routed to DL/I (if available).
On	The ADL CALLDLI Interface is active. All DL/I requests are routed to ADL, which decides whether they can be handled by Adabas or whether they have to be forwarded to DL/I (mixed mode only).
Indoubt	The ADL Interfaces are in an undefined state. The initialization could not be completed successfully. Do not attempt to run your system when it is in this state. Deactivate the ADL interfaces and determine the cause of the problem. When the problem has been solved, you can start the ADL Interfaces again. You are recommended, however, to restart your CICS system after a failure of the ADL initialization.

The ADL Consistency Interface can be in one of the following states:

Status	Description
Off	The ADL Consistency Interface is either not installed or not activated. If it is not installed, all Adabas requests are routed to Adabas. Otherwise, depending on the entries in the DAZTCF table, the call is either routed to Adabas or is refused with response 216.
On	The ADL Consistency Interface is installed and active. All Adabas requests are routed to ADL, which then decides if the requests can be forwarded directly to Adabas, or if they have to be processed by ADL first.

Furthermore, the CICS Maintenance menu outlines the terminal ID, the CICS level, and whether DL/I is in the system. The latter information can only be retrieved if the ADL CALLDLI Interface is active. Finally the status of the ADL trace facility is displayed. It shows if the ADL internal routines and/or the DL/I and Adabas calls will be traced and for which terminal(s).

The functions provided by the CICS Maintenance menu are described now in detail. If you mark more than one function, they are processed one after the other.

Switch ADL Interfaces on / off

When you mark this function in the CICS Maintenance menu, the ADL CALLDLI and Consistency Interfaces are switched on or off, depending on their current status. When switching ADL off, you will be asked to confirm the requested function in a pop-up window.

The ADL Consistency Interface will only be activated if it is installed. This function will also reset all internal tables used by ADL to handle the PSB scheduling. In addition a summary will be printed on the performance of the ADL buffer management. See the section *Generating the Runtime Control Tables* in the for more details on how to use this report.

When the ADL CALLDLI Interface is successfully activated the following message is displayed:

```
ADL0939 - Adabas Bridge for DL/I initialized
```

When the ADL Interfaces are deactivated, the following message is displayed:

```
ADL0940 - Adabas Bridge for DL/I switched off
```

Switch Trace Facility on / off

When you select this function in the CICS Maintenance menu the following pop-up window is displayed

```

11:10:15          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
1424 / 802          - CICS Maintenance -                      ADLCICSM

CALLDLI Interface ..... On                               Terminal ID .... TCG7
Consistency Interface .. On                               Routine Trace .. Off
DL/I in System ..... No                                 Call Trace ..... Off
CICS Level ..... 0640                                   Trace Term ID ..

                Functions :

      _ Switch A+-----+
x Switch T| Switch on ADL Routine Trace . Y |
      _ List CIC| Switch on ADL Call Trace .... Y |
      _ List ADL| Terminal ID(s)..... TCG7 |
      _ Dump ADL| |
                | Enter to perform, PF3 to exit |
                +-----+

Mark the requested function(s).

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit ADL  Trace PSBs                               Zaps                               Can

```

This Trace facility provides the same trace possibilities as the batch Trace facility described in the section Debugging Aids - ADL Trace Facility later in this documentation.

You can specify which kind of trace should be activated and for which terminal(s). The default terminal ID is the current one. A blank character is treated as a wildcard. For example to switch on the ADL Trace facility for all terminals where the ID starts with an 'A', specify 'A' as terminal ID. If the terminal ID is completely blank, the ADL Trace facility is started for all terminals. Note, that you can only activate the Trace facility successfully, if the trace datasets have been installed.

List CICS PSB Table

If you select this function in the CICS Maintenance menu, the following screen is displayed.


```

11:19:15          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
1424 / 802          - CICS PSB Table -                          ADLCPSBM

Nr.      Name      Status  Lan #PCB #IO-PCB DBID Schedule Total use  Rolled out
-----
 29  PSB026  DL/I    -    -    -    -    -    -    -
 30  PSB027  DL/I    -    -    -    -    -    -    -
 31  PSB028  DL/I    -    -    -    -    -    -    -
 32  PSB029  DL/I    -    -    -    -    -    -    -
 33  PSB030  DL/I    -    -    -    -    -    -    -
 34  SCHOOL  ADL    CBL   10    0  1424    0    0    0
 35  SCHOOLL ADL    CBL    1    0  1424    0    0    0
 36  TSTPSB  ADL    CBL    6    0  1424    0    0    0
 37  UNKNOWN DL/I    -    -    -    -    -    -    -

Start:                                                    Total : 37

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                               Prev Next           Top  Bot   Can
    
```

It lists all the PSBs contained in the DAZPSB table. The status indicates how the PSB was initialized. Possible status values are: 'ADL', 'DL/I' and 'Mixed'. Their meaning is described under *CALLDLI Interface* in the section *CICS Installation and Operation*. The following information can only be retrieved if the PSB status is 'ADL' or 'Mixed':

Column	Description
Lan	The language of the corresponding application program(s) as defined in the PSB source.
#PCB	The total number of PCBs in the PSB.
#IO-PCB	The number of IO-PCBs in the PSB.
DBID	The Adabas DBID of the ADL files belonging to the PSB.
Schedule	The number of tasks currently scheduling the PSB.
Total use	The number of tasks which have used the PSB up to now.
Rolled out	The number of times the PSB-related ICBs have been rolled out to the ADL directory file.

You can use the PF-keys for scrolling or you can specify a start value to restart the list from that value. Note that pressing ENTER refreshes the screen.

List ADL Zap Status

If you select this function in the CICS Maintenance menu, the following screen is displayed:

```

11:23:47          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
1424 / 802        - List ADL Zap Status -                      ADLCZAPM

      Range                Applied Zaps
-----
001 - 010          001 002 ... .. 006 ... ..
011 - 020          ... ..
021 - 030          ... ..
031 - 040          ... ..
041 - 050          ... ..
051 - 060          ... ..
061 - 070          ... ..
071 - 080          ... ..
081 - 090          ... ..
091 - 100          ... ..

Start: 1

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Prev Next           Top  Bot  Can

```

It lists all zaps applied to the ADL CICS nucleus DAZNUCC. A zap which is applied, is indicated by its number. Possible zap numbers are 1 through 500. You can use the PF-keys for scrolling or you can specify a start value to restart the list from that value.

Dump ADL Tables

When you select this function in the CICS Maintenance Menu, the following pop-up window is displayed:

```

11:28:11          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
1424 / 802        - CICS Maintenance -                      ADLCICSM

CALLDLI Interface ..... On                               Terminal ID .... TCG7
Consistency Interface .. On                               Routine Trace .. Off
DL/I in System ..... No                                 Call Trace ..... Off
CICS Level ..... 0640                                   Trace Term ID ..

      Functions :

      _ Switch ADL Interfaces off
      _ Switch Trace Facility on
      _ List CICS PSB Table
      _ L +-----+
      x D | Writing ADL tables to the dump file |
          | Do you wish to continue? Y/N ..... Y |
          | ENTER to perform, PF3 to exit |
          +-----+

Mark the requested function(s).

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit ADL Trace PSBs           Zaps           Can

```

When you enter 'Y' (yes), the ADL CICS tables DAZPSB, DAZDBD and DAZBUF are written to the CICS dump file, together with the ADL internal area DAZSYSDS and the ADL zap directory. This information is helpful when debugging abnormal terminations of application programs under CICS.

ADL Directory Management Facility

This service is reached by selecting code D in the Main Menu.

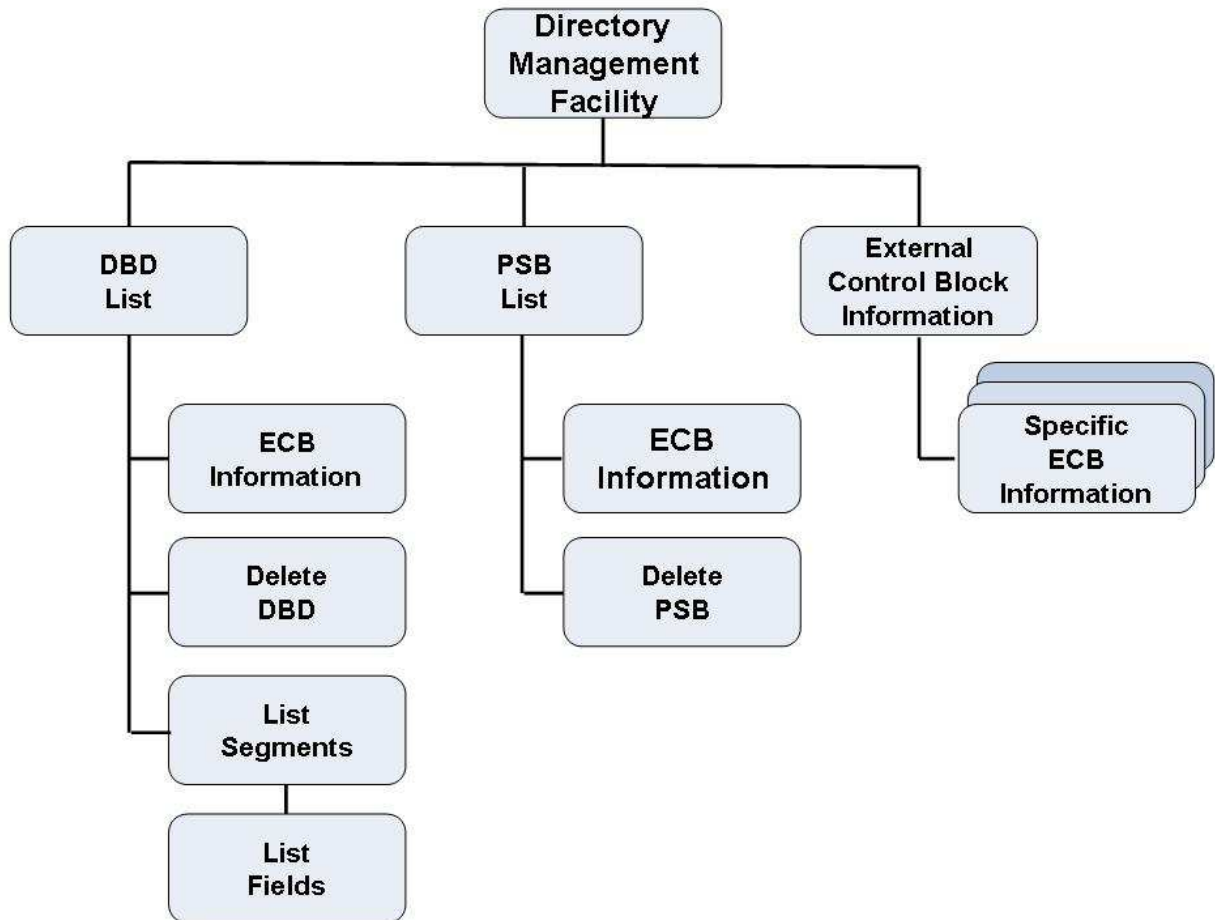


Figure 2: Directory Management Facility

The ADL Directory Management Facility (DMF) consists of following parts:

- The "Directory Management Facility" menu is the entry to DMF and all its services.
- The "DBD List" menu provides a list of all DBDs which are stored on the ADL directory file.
- The "List Segments" menu shows you the segments of a specific DBD.
- The "List Fields" menu exposes the definitions of the fields under a given segment.
- The "PSB List" menu provides a list of all PSBs which are stored on the ADL directory file.
- You can "delete DBDs" or "PSBs" from the ADL directory file.
- In the "External Control Block Information" menu you can retrieve an external control block (ECB) in hexadecimal and character format.
- The "specific ECB Information" provides you with all information of a specific ECB.

Directory Management Facility Menu

```

11:31:32          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802    - Directory Management Facility -          ADBDMF-M

                Code  Function                                Name
                ----  -
                D     DBD List                                O
                L     List Segments of Data Base            R
                P     PSB List                                O
                I     ECB Information
                ?     Help
                .     Back to the Main Menu
                ----  -

Enter Code :      Name:                                     R -> required
                                                         O -> optional

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                                     Can
    
```

This service is reached by selecting code D in the Main Menu. It is the entry to the DMF. The codes in the menu provide the following functions:

Code	Function
D	DBD List. Display all data bases, which are stored in the ADL directory file. The list starts at the specified DBD name, or if none is given, at the top.
L	List Segments. Explode the segments of the given DBD. A name of a DBD is required.
P	PSB List. Display all PSBs, which are stored in the ADL directory file. The list starts at the specified PSB name, or if none is given, at the top.
I	ECB Information. Retrieve a detailed list of information of any external control block.
?	Online Help.
.	Back to the Main Menu.

DBD List Menu

```

11:33:57          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
01424 / 00802          - DBD List -                          ADBDBD-M

      Cmd DBD      Typ      Cmd DBD      Typ      Cmd DBD      Typ
      -----      ---      -----      ---      -----      ---
      _ COURSEDB  P          _          _          _          _
      _ COURSEL   L          _          _          _          _
      _ INSTDB    P          _          _          _          _
      _ INSTL     L          _          _          _          _
      _ STUDIDX   X          _          _          _          _
      _          _          _          _          _          _
      _          _          _          _          _          _
      _          _          _          _          _          _
      _          _          _          _          _          _
      _          _          _          _          _          _

      Start: _____

Available Commands: Delete  Inform  List  Quit

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Next          Top          Can
    
```

This service is reached by selecting code D in the Directory Management Facility menu. It lists all DBDs of the ADL directory file, together with their type. Possible types are:

Type	Meaning
P	Physical DBD
L	Logical DBD
X	Secondary Index DBD

The DBDs can be marked with the following line commands:

Line Command	Meaning
D	A pop-up window for interactive confirmation is displayed. The marked DBD will be deleted from the ADL directory file, if you confirm with 'Y' (yes). Note that the Adabas file(s) containing the data of the DBD, will not be deleted.
I	Display the ECB Information of the marked DBD.
L	List the segments of the marked DBD.
Q	Exit the DBD List menu.

If you want to delete a physical DBD, you must also delete all secondary index DBDs, which are related to this DBD. Otherwise the CBC utility will indicate an error situation in case you reconvert the DBD. A DBD can also be deleted with the DELDBD function of the ADL CBC utility which automatically deletes the related secondary index DBDs.

If you enter a new start name in the corresponding field, the DBD list will start at the given value.

List Segments Menu

```

15:24:52          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
01424 / 00802          - List Segments -          ADBSEG-M

          Data Base: COURSEDB          Type: Physical
          Converted
There are 4 Segments in 3 Levels with 1 Secondary Index.          Completed

  Seg Segment      ADA ADA ADA   Seg No.   ADA   ADA   Log   L.Parent L.Parent
Cmd  No  Name      Level Grp  PCK  VCK   Len  Fld   Dbid  Fnr   Id   DB-Name Seg-Name
-----
_    1  COURSE      1   SA  PC      30   1   1424  833  71
_    2  CLASS       2   SB  PB      20   1   1424  833  71
_    3  STUDENT     3   SA           40   2   1424  835  73
_    4  INSTRP      3   SB           25   2   1424  834  72  INSTDB  INSTRUCT
_
_
_
_

Available Commands: List Quit

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                               Next           Top           Can
    
```

This service is reached by selecting code L in the Directory Management Facility menu or by marking a DBD with code L in the DBD List menu. It informs you about a DBD and all its segments. The name and type of the DBD are displayed. Possible types are 'Physical', 'Logical', and 'Index'. It is also indicated, whether the data base is converted to Adabas and whether the conversion is completed. 'Completed' means, that all DBDs with logical relationships to the given one, are converted, too. Furthermore the number of segments, of hierarchical levels and of secondary indices is given.

The list of segments contains the following information:

Column	Meaning
Cmd	Here the user can insert a line command. The available commands are explained later.
Seg No.	The DL/I hierarchical segment number (position).
Segment Name	The name of the segment as defined in the original DL/I DBD definition.
Level	The DL/I hierarchical level. This defines together with the segment number the hierarchical structure of the DBD.
ADA Grp	The name of the Adabas group corresponding to the DL/I segment.
ADA PCK	The Adabas name of the partial concatenated key (PCK) field. For every segment with a sequence field a PCK field is created. It contains the data of the sequence field, if a dependent segment is accessed.
ADA VCK	The Adabas name of the virtual concatenated key (VCK) field. It follows the same rules as the PCK field, but is only created, if a DBD is involved in logical relationships by itself. This means, that one segment of the DBD is a logical parent of a segment of the same DBD. The VCK field contains the data of the sequence field, if a logically dependent segment is accessed.
Segm. Length	The length of the segment as defined in the original DL/I DBD definition. This is also the total length of all Adabas fields, which belong to the corresponding Adabas group.
No. Flds	The number of DL/I fields belonging to this segment. Be aware that this is often not the number of Adabas fields of the corresponding Adabas group. In fact ADL creates Adabas fields not only for every DL/I field, but also for every part of a DL/I segment for which no DL/I field is defined. This are the so-called "filler" fields. On the other hand for a redefined DL/I field no Adabas field may be created.
ADA Dbid/Fnr	The Adabas DBID and file number of the ADL file with the data of this segment. If the DBID is 0, the DBID of the ADL directory is used at runtime.
Log Id	The logical ID used for the unique identification of the hierarchical structured data.
L. Parent DB/Seg-Name	If the segment is a logical child of another segment, the DL/I data base and segment name of this "logical parent" segment are exposed here.

Note that for segments in a logical DBD only the segment number, name and level are exposed.

Possible line commands are:

Line Command	Meaning
L	List the field definitions of the marked segment.
Q	Exit the List Segments menu.

List Fields Menu

11:38:57	*** ADL ONLINE SERVICES 2.3.1 ***	19.06.2007	
01424 / 00802	- List Fields -	ADBFIE-M	
Data Base : COURSEDB Type ..: Physical			
Segment ..: CLASS Length : 20			
Name	DL/I Type Format Start Length	ADABAS Name Type Format	Comments
-----	-----	-----	-----
CLASSNO	SEQ,U C 1 5	AC A	UNIQUE FIELD
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---			
Help		Exit	Next Top Can

This service is reached by marking a segment with code L in the List Segments menu. It informs you about the fields of a segment. The name and type of the DBD is shown together with the name and length of the segment.

The list of fields is divided in three parts:

Part	Description
DL/I	The definitions of the DL/I field are displayed here: Name, format, start and length. For more information about these values see the <i>IMS/VS Utilities Reference</i> documentation.
Adabas	The definitions of the Adabas field are shown here: Name, type and format. The Adabas field length is the same as the corresponding DL/I field length. For more information about these values see the <i>Adabas Utilities</i> documentation .
Comments	A comment can be displayed here.

PSB List Menu

```

11:40:32          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802          - PSB List -          ADBPSB-M

      Cmd PSB          Cmd PSB          Cmd PSB
      ----
      - SCHOOL          -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -
      -                  -          -

      Start: _____

Available Commands:  Delete  Inform  Quit

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Next          Top          Can
    
```

This service is reached by selecting code P in the Directory Management Facility menu. It lists all PSBs of the ADL directory file.

The PSBs can be marked with the following line commands:

Line Command	Meaning
D	A pop-up window for interactive confirmation is displayed. The marked PSB will be deleted from the ADL directory file, if you confirm with 'Y' (yes).
I	Display the ECB Information of the marked PSB.
Q	Exit the PSB List menu.

If you enter a new start name in the corresponding field, the PSB list will start at the given value. A PSB can also be deleted with the DELPSB function of the ADL CBC utility.

External Control Block Information Menu

```

11:42:48          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802    - External Control Block Information -        TESTECBM

Code .....: I          (Ecb,Info)
Type .....: DBD        (Dbd,Seg,Fld,seX,Lch,Psb,pCb,SEs,SeF,xRf)
PSB/DBD name ....: COURSEDB
PCB/DBD offset ..: 00000000      PSB/XRF offset ..: 00000000

ECB type ..... DBD          Lines ..... 2

L Offset      External Control Block (hex)          ECB (char)          DBD,PSB
-----      -
1  0000      00000000 00000460 C3D6E4D9 E2C5C4C2 *      ?-COURSEDB *      00000000
   0010      00000000 00000000 00000000 00000000 *      * *      00000010
2  0020      00000040 00000460 04010329 000003A0 *      ?-???? ?? *      00000020
   0030      00000000 00000000 00000000 00000000 *      * *      00000030
3  0040      40404040 40404040 40404040 40404040 *      * *      00000040
   0050      40404040 40404040 40404040 40404040 *      * *      00000050
4  0060      40404040 40404040 40404040 40404040 *      * *      00000060
   0070      40404040 40404040 40404040 40404040 *      * *      00000070

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help          Exit          Next          Can
    
```

This service is reached by selecting code I in the Directory Management Facility menu. To retrieve information of an external control block (ECB) you have to specify a code, the type of the ECB, the PSB or DBD name, and the offset to the ECB.

The "Code" defines how the information is to be returned.

Code	Meaning
E	The ECB is listed in hexadecimal and character format on the bottom of the current screen.
I	A detailed list of information of the specified ECB is displayed. When returning to the current map, the ECB is listed as with code E.

The "Type" specifies the type of the requested ECB. Possible types are : DBD, SEG (segment), FLD (field), SEX (secondary index), LCH (logical child), PSB, PCB, SES (sensitive segment), SEF (sensitive field), XRF (external reference). The shortest possible abbreviation for a type is denoted by uppercase characters, like 'D' for DBD. In general you may use a 'D' for all DBD-related ECBs (DBD, SEG, FLD, SEX, LCH, XRF) and a 'P' for all PSB-related ECBs, (PSB, PCB, SES, SEF). But if you use the 'Next' (PF8) function, you must specify the correct type.

The "PSB/DBD name" is the name of the PSB or DBD, to which the ECB belongs.

The offsets have to be specified in hexadecimal format. Which offsets you have to specify depends on the ECB type you want to retrieve.

ECB Type	PCB/DBD Offset	PSB/XRF Offset
DBD	0	0
SEG,FLD,SEX,LCH	offset to ECB	0
PSB	0	0
PCB	0	offset to PCB
SES,SEF	offset to ECB	offset to PCB
1st XRF	offset to 1st XRF	0
more XRF	offset to 1st XRF	offset to current XRF

If you want to retrieve a specific ECB and you don't know the offset to it, you have to start with the DBD or PSB ECB. For these the offsets are all zero. In the ECB Information you find the offset to the first sub-structure like SEG or PCB. Then you can continue with the sub-structures until you reach the requested ECB.

Example

You want to retrieve the ECB information of the first field 'CLASSNO' in the second segment 'CLASS' of the DBD 'COURSEDB'. Specify Code 'I', PSB/DBD name 'COURSEDB', and PSB/XRF offset '0'. Then specify the following types and PCB/DBD offsets to retrieve the information which is required for the next step.

Step	Type	DBD Offset	Retrieved ECB	Page	Line	Value
1	DBD	00000000	DBD COURSEDB	1	'First segment'	00000040
2	SEG	00000040	Segment COURSE	1	'Next segment'	00000160
3	SEG	00000160	Segment CLASS	2	'First field'	000001E0
4	FLD	000001E0	Field CLASSNO			

For each retrieved ECB, the type (which can differ from the specified type) and the number of lines used by this ECB are displayed. The list contains a line counter ('L'), the offset relative to the start of the ECB, the ECB in hexadecimal and character format, and the offset relative to the start of the corresponding DBD or PSB ECB. This last offset is the sum of the two specified offsets.

With the PF8 ('Next') key, you retrieve the next ECB of the same type. This function is not available for DBD and PSB ECBs. In the example above you can press the PF8 key in step 3 instead of specifying the DBD offset '160', to retrieve the second segment (CLASS).

Specific ECB Information

```

11:53:47          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
01424 / 00802          - ECB Information -                    ADLPCB1M

SCHOOL  + 00000520          PCB 7          Page 1 of 3

Keyword  Name          Description          Value
-----  -----  -----  -----
          TYPEC$TY  Type of ADL External Control Block ... 18          => PCB
          TYPECNXT  Next PCB ECB (PSB offset) ..... 000005E0
DBDNAME  PCBECNAM  Name of corresponding DBD ..... COURSEDB
PROCSEQ  PCBECIND  Index DBD name .....
          PCBECNUM  PCB progressive number ..... 7
          PCBECCLV#  Number of levels ..... 3
          PCBECASN#  Total number of sensitive segments ... 4
KEYLEN   PCBECKEY  Key feedback area length ..... 35
          PCBECSEN  First sensitive segment (PCB offset) . 00000040 => COURSE
          PCBEC$TY  Type of PCB ..... 02
TYPE     PCBEC#GM  GSAM PCB .....
POS      PCBEC#MP  Multiple positioning support ..... X

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF11--PF12---
      Help          Exit          Prev Next          Top Bot Can
    
```

This service is reached by selecting code I in the External Control Block Information menu or by marking a line with I in the DBD List or PSB List menu. It supplies you with all information of a specific external control block (ECB). In the header is the type and the name of the ECB displayed, together with the DBD/PSB name and the offset to the current ECB. The page number can be overwritten, if a specific page should be listed. Beside of the standard PF keys, you can also specify a page '0' to exit the menu. The columns in the list provide the following information:

Column Meaning

Column	Meaning
Keyword	The DL/I keyword of the DBD/PSB definition, which specifies the value. For more information about the keywords see the <i>IMS/VS Utilities Reference</i> documentation.
Name	The ADL internal used name of the value.
Description	A short description of the value.
Value	Counters and numbers are printed in decimal format, offsets and type or flag bytes in hexadecimal format. A flag is set, if the value is 'X'. Some values are coded, for example the 'Type'. In this case the corresponding read-able value is denoted by '=>'. For some offsets the corresponding ECB name is denoted in the same way.

Consistency DBD Maintenance

This service is reached by selecting code A in the Main Menu.

```

11:56:47          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
01424 / 00802    - DBDs for the ADL Consistency Interface -    ADBCFD-M

      Cmd DBD   Status      Cmd DBD   Status      Cmd DBD   Status
      ----
      _ COURSEDB  N          _          _          _
      _ INSTDB   N          _          _          _
      _
      _
      _
      _
      _
      _
      _
      _
      _
      _

Start: _____

Available Commands: Yes No

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit Yes No      Undo           Next Save Top           Can

```

This menu lists all converted physical DBDs. It exposes if the corresponding Adabas files can be accessed by the ADL Consistency Interface or not by the status "Y" (yes) or "N" (no), respectively. You can change the status by entering the appropriate line commands. Save your changes with PF9.

The status is defined with the CONSI parameter of the GENDBD function at the DBD conversion. See the section *ADL Conversion Utilities for DBDs and PSBs* in the *ADL Conversion* documentation for more details. Any changes of the status should be evaluated carefully. An Adabas/ Natural call (batch or online) referencing a DBID / FNR which belongs to a DBD with status "N", is routed directly to Adabas. Thus, if a DBD should be accessed by both DL/I and Adabas / Natural applications, it's status must be "Y".

You may set the status of a DBD to "N", if there is no Adabas / Natural application which updates the corresponding files.

You may also set the status to "N", if only Adabas / Natural applications access this DBD, and you have decided not to run any other DL/I applications against it. In this case there is no need to support the ADL internal fields anymore.

Unused DBDs should have the status "N" or should be deleted from the directory file. This should be done, in order to avoid problems during the building up of the internal Consistency PSB, which picks up all converted physical DBDs with status "Y".

If there is more than one DBD referencing the same data (i.e., the same Adabas file), only one of them should have the status "Y". All others should be set to "N".

Note, that the CICS or IMS/TP tables have to be re-generated (see the section *Generating the Control Tables* in this documentation), if you change the status of a DBD from "N" to "Y".

Possible line commands are:

Line Command	Meaning
Y	Set the status to "Y" (yes). Calls against this DBD will be handled by the ADL Consistency Interface.
N	Set the status to "N" (no). Calls against this DBD will be routed directly to Adabas.

If you enter a new start name in the corresponding field, the list will start at the given value.

The assignment of the function keys is as follows:

Key	Function
PF4	Set the status of all DBDs on the current page to "Y".
PF5	Set the status of all DBDs on the current page to "N".
PF6	Undo all modifications on the current page.
PF9	Save all modifications.

If you leave the menu and there are any modifications which have not yet been saved, you will be asked whether you want to save them or not.

Maintenance of the Rolled-out PSBs

This service is reached by selecting code R in the Main Menu.

At start-up of ADL under CICS or IMS/TP all PSB related external control blocks (ECBs) are converted to internal control blocks (ICBs) and rolled out to the ADL directory file. They are stored with the name of the environment (CICS or IMS/TP start-up job name) and the PSB name. They can be deleted, if ADL is not active in the corresponding environment.

The Maintenance of the Rolled-out PSBs consists of following parts:

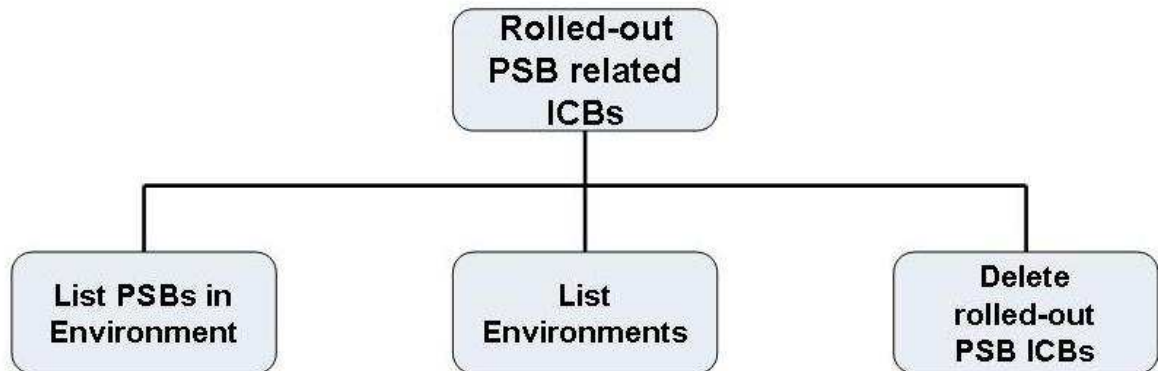


Figure 3: Rolled-out PSBs

Rolled-out PSB-related ICBs menu

This service is reached by selecting code R in the Main Menu.

```

11:58:31          *** ADL ONLINE SERVICES 2.3.1 ***          19.06.2007
01424 / 00802    - Rolled-out PSB-related ICBs -          ADLPIM-M

Code  Function
----  -
P    List PSBs in Environments
E    List Environments
D    Delete Rolled-out PSB ICBs
?    Help
.    Back to the Main Menu
----  -

Enter Code :

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  PSBs  Env.                                  Can
  
```

This menu is the entry to the Maintenance of the Rolled-out PSBs. The codes in the menu provide the following functions:

Code	PF-Key	Function
P	PF4	List all PSBs for all environments.
E	PF5	List all environments.
D		Delete all or specific PSBs.
?		Online Help.
.		Exit the menu.

List of the PSBs in the Environments

```

Dir 1424 / 802 - ADL 2.3.1 Rolled-out PSB-related ICBs - Page 1
-----
  No.          Env. (Hex)          PSB (Hex)          Env.    PSB          Blocks
-----
    1    C4C1C5C6 C3C9F0F2    C1C4D35B D7E2C240    DAEFCI02 ADL$PSB         3
    2    C4C1C5C6 C3C9F0F2    C6C5D5C4 E3D7E2C2    DAEFCI02 BIGPSB         1
    3    C4C1C5C6 C3C9F0F2    E2C3C8D6 D6D34040    DAEFCI02 SCHOOL         3
    4    C4C1C5C6 C3C9F0F2    E2C3C8D6 D6D3D340    DAEFCI02 SCHOOLL        1
    5    C4C1C5C6 C3C9F0F2    E3E2E3D7 E2C24040    DAEFCI02 TSTPSB         3

Total number of rolled-out PSB-related ICBs .. :      5
Total number of environments ..... :      1

MORE
    
```

This service is reached by selecting code P or pressing PF4 in the Rolled-out PSB- related ICBs menu. It lists the names of the environments and of the PSBs in hexadecimal and character format. Additionally it outlines how many blocks (Adabas records) are used to store the ICBs. At the end of the list the total number of the rolled-out PSB-related ICBs and of the environments is printed.

Note, that the list is printed in sequential sequence. You can only page forward (by pressing ENTER). When all PSBs have been listed, the Rolled-out PSB-related ICBs menu is displayed.

List of the Environments

```

Dir 1424 / 802 - ADL 2.3.1 Environments of PCB-related ICBs - Page 1
-----
  No.          Env. (Hex)          Env.
-----
    1    C4C1C5C6 C3C9F0F2    DAEFCI02

Total number of environments ..... :      1

MORE
    
```

This service is reached by selecting code E or pressing PF5 in the Rolled-out PSB-related ICBs menu. It lists the names of the environments in hexadecimal and character format. At the end of the list the total number of the environments is printed.

Note, that the list is printed in sequential sequence. You can only page forward (by pressing ENTER). When all environments have been listed, the Rolled-out PSB-related ICBs menu is displayed.

Delete Rolled-out PSBs

This service is reached by selecting code D in the Rolled-out PSB-related ICBs menu. First a pop-up window is displayed, where you can choose, how to continue.

Enter	Meaning
Y	For each environment you will be asked if you want to delete the PSBs.
N	No PSB is deleted. Back to the Rolled-out PSB-related ICBs menu.
X	All PSBs in all environments will be deleted. There is no additional confirmation.
T	Test mode. All environments will be processed, but no PSB will be deleted.

If you have entered 'Y', 'X', or 'T' in the pop-up window, the Delete PSB-related ICBs menu is displayed.

```

13:23:16          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802      - Delete PSB-related ICBs -                ADLPID-M

  No.   Environ.   PSBs   Status
  ----   -
    1   DAEFCI02
                                Environments :
                                PSBs .....:
                                Records .....:

                                Start time ..: 13:23:16.7
                                Elapsed time : 00:00:00.0

                                Confirm deletion of PSBs in DAEFCI02
                                with Y                                N

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Next  Help           Exit                                Next                                Can
    
```

It lists the processed environments, the number of PSBs in the environment and the status. The status can be either 'deleted' or blanks (not deleted). Additionally it informs you about the total number of environments, PSBs, and records (blocks), which have been processed up to now. The start and elapsed time of the processing is also displayed.

If you have entered 'Y' in the pop-up window, the name of an environment is displayed and you have to confirm the deletion.

Enter	
Y	All PSBs of the displayed environment will be deleted.
N	No PSB of the displayed environment will be deleted.
X	All PSBs of the displayed and of all following environments will be deleted. There is no additionally confirmation.
T	Test mode. No PSB of the displayed environment will be deleted. The following environments will be processed without confirmation, and no PSB of them will be deleted.

Note that a PSB must not be deleted, if ADL is active in the corresponding environment.

Maintenance of Checkpoints

This service is reached by selecting code X in the Main Menu.

When a batch application issues a checkpoint, ADL writes a checkpoint entry to the ADL directory file. A checkpoint entry is identified by the program name and the checkpoint ID. If the program terminates normally, all written checkpoints will be removed from the directory and will, therefore, not appear on either list mentioned below. But if the program terminates abnormally, the checkpoints will be listed and can be used to restart the program. For more information on how to restart a program, see the section *Recovery and Restart Procedures* in this documentation.

Checkpoint Maintenance produces two types of lists:

- Checkpoint Information List: shows each individual checkpoint ID together with the name of the abnormally terminated program,
- Checkpoint Program List: shows the total amount of checkpoints for each abnormally terminated program.

Checkpoints can also be deleted, whereby all checkpoints related to one program, are always deleted together. It is, therefore, impossible to delete individual checkpoints.

Note:

Do not delete any checkpoints belonging to programs which are to be restarted.

The checkpoint maintenance feature consists of the following parts:

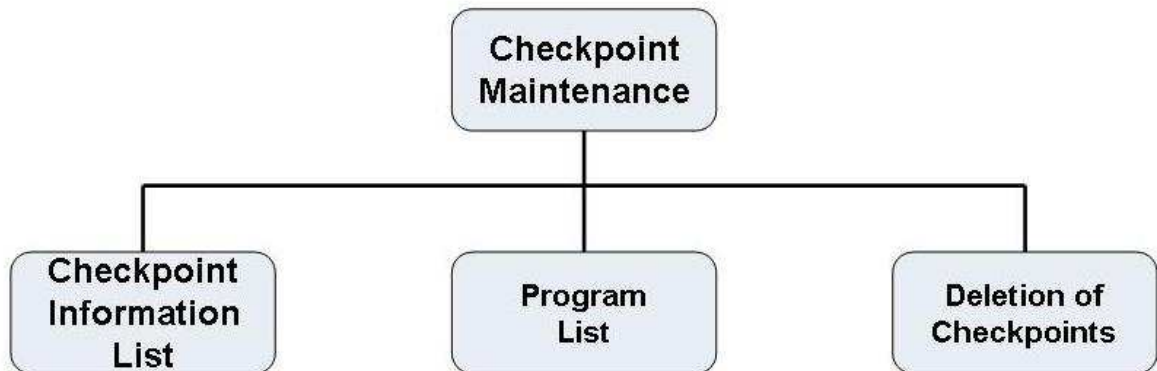


Figure 4: Checkpoint Maintenance

Checkpoint Maintenance Menu

This service is reached by selecting code X in the Main Menu.

```

13:25:12          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802      - Checkpoint Maintenance -          ADLXCM-M

                Code  Function
                ----  -
                L    List all Checkpoints
                P    Program List
                D    Delete Checkpoints
                ?    Help
                .    Back to the Main Menu
                ----  -

Enter Code :

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit  Chkp  Prog                                Can
    
```

This menu is the entry to the Checkpoint Maintenance. The codes in the menu provide the following functions:

Code	PF-Key	Function
L	PF4	List each checkpoint ID and program name.
P	PF5	List all abnormally terminated programs.
D		Delete checkpoints of all/specific programs.
?		Online Help.
.		Exit the menu.

Checkpoint Information List

This service is reached by selecting code L or pressing PF4 in the Checkpoint Maintenance menu. It lists the names of all abnormally terminated programs and the individual checkpoint IDs for each of those programs. Additionally, it outlines how many Adabas records are used for each checkpoint entry. At the end of the list the total number of checkpoints and of effected programs is printed.

Note, that the list is printed in sequential order. You can only page forward (by pressing ENTER). When all programs with the related checkpoint IDs have been listed, the Checkpoint Maintenance menu is displayed.

```

Dir. 1424 / 802 - ADL 2.3.1 List Checkpoint Information - Page 1
-----
  No.      Program      Checkpoint      Records
-----
    1     DAZZLER      GSM06X01         3

Total number of Checkpoints ..... :      1
Total number of effected programs ..... :      1

MORE
    
```

Checkpoint Program List

```

Dir. 1424 / 802 - ADL 2.3.1 Checkpoint Program List - Page 1
-----
  No.      Program      Checkpoints
-----
    1     DAZZLER         1

Total number of Checkpoints ..... :      1
Total number of effected programs ..... :      1

MORE
    
```

This service is reached by selecting code P or pressing PF5 in the Checkpoint Maintenance menu. It lists the names of abnormally terminated programs and the total amount of checkpoints for each program.

Note, that the list is printed in sequential order. You can only page forward (by pressing ENTER). When all applicable programs have been listed, the Checkpoint Maintenance menu is displayed.

Deletion of Checkpoints

This service is reached by selecting code D in the Checkpoint Maintenance menu. First, a pop-up window is displayed, where you can choose from the following options:

Enter	Meaning
Y	For each program you will be asked if you want to delete the checkpoints.
N	No deletion. Back to the Checkpoint Maintenance menu.
X	All checkpoints of all programs will be deleted. There is no additional confirmation.
T	Test mode. All programs will be processed, but no checkpoint will be deleted.

If you have entered 'Y', 'X', or 'T' in the pop-up window, the Delete Checkpoints menu is displayed.

```

14:08:28          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802          - Delete Checkpoints -          ADLXCD-M

   No.   Program   CPIDs   Status
-----
    1   DAZZLER
                                     Programs ....:
                                     Checkpoints .:
                                     Records .....:

                                     Start time ..: 14:08:28.0
                                     Elapsed time : 00:00:00.0

                                     Confirm deletion of the checkpoints
                                     of program DAZZLER with Y N

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Next Help           Exit                               Next                               Can
    
```

It lists the program names, the number of checkpoints found in them and their status. The status can be either 'deleted' or blanks (not deleted). Additionally, it informs you about the total number of programs, checkpoints and Adabas records, which have been processed up to now. The start and elapsed time of the processing is also displayed.

If you have entered 'Y' in the pop-up window, the name of an environment is displayed and you have to confirm the deletion.

Enter	Meaning
Y	All checkpoints of the displayed program will be deleted.
N	No checkpoint of the displayed environment will be deleted.
X	All checkpoints of the displayed and of all following programs will be deleted. There is no additionally confirmation.
T	Test mode. No checkpoint of the displayed program will be deleted. The following programs will be processed without confirmation, and checkpoints will not be deleted.

Checkpoints must not be deleted, if it is planned to restart the program.

Messages and Codes Retrieval

This service is reached by selecting code M in the Main Menu. It starts with the ADL messages retrieval.

```

14:10:30          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802      - Messages and Codes Retrieval -          ADLEMR-M

ADL message no.: 0701

Description:
Illegal or missing parameters

Cause   : The mandatory parameters for DAZIFP were not specified
          correctly. There should be three positional parameters:
          xxx,pgmname,psbname,
          These may be followed by keyword parameters.
Action  : Check the input parameters and correct the error. See the
          chapter Batch Installation and Operation, ADL Interfaces Manual
          for details.

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Read  Help Code Exit                Prev Next                                Can
    
```

Enter a message number (range 1 to 1400) to retrieve the description of the ADL error message. Additionally the probably cause for the failure and the recommended action is displayed.

With the PF2 key you can switch to the ADL ABEND and DL/I status codes retrieval.

```

14:12:13          *** ADL ONLINE SERVICES  2.3.1 ***          19.06.2007
01424 / 00802    - Messages and Codes Retrieval -          ADLEMC-M

ABEND/Status code : ix

Description:
Violated insert rule

Cause .....: An insert rule has been violated.
Action .....: Check the insert rules and correct the program.
Command completed : No
Error situation ..: Yes (CMD or Conversion)
Possible commands : ISRT.

Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
Read  Help  Msg  Exit                               Prev  Next                               Can
    
```

Enter the last two characters, to retrieve the description of the corresponding ADL ABEND code, i.e. 'Z1' for ABEND code 'DAZ1'. The ABEND codes are displayed together with the probably cause and the recommended action.

Enter a two character DL/I status code to retrieve the description of that status code. Further the following information is displayed: The cause, the recommended action, whether the command has been completed, whether it is an error situation, and for which commands this status code can be retrieved. It is also indicated, if a status code can only be issued by DL/I (i.e. not by ADL), or if it can only be issued by ADL.

Press the PF2 key to switch back to the ADL messages retrieval.

The message number 1500 (status code VR) has a special meaning. It indicates the current version of ADL and gives some information about the ADL directory file.