ADACALL Utility - Issuing Adabas Direct Calls

The utility ADACALL can be used to issue Adabas direct calls (native commands) to an Adabas database for learning and testing and for analyzing problems.

The utility ADACALL is contained in the library SYSADA.

The *ADACALL Utility - Issuing Adabas Direct Calls* documentation covers the following topics:

- Invoking ADACALL
- ADACALL Parameters
- ADACALL Commands and PF Keys
- User Exit ADAEXIT

Invoking ADACALL

To invoke ADACALL

- Enter the following system command:

```
SYSADA
```

An ADACALL main screen similar to the example screen below is displayed:

```
15:53:32             ***** NATURAL ADACALL UTILITY *****             2006-12-14
 User SAG                   - ADABAS Direct Calls -
 Mode Char                                                  Call No. 45
 *** Control Block ***          First Byte 30
  Cmd L3        Cmd ID SAG           File 316             Database 10
 Resp 0            ISN 382            ISQ 0                  ISL 0
  FBL 210          RBL 980            SBL 140     VBL 140    IBL 0
 COP1             COP2          User Area                 Cmd Time 4
 Addition1        Addition2  Addition3        Addition4        Addition5
 AA]?             227  48
 *** Buffer Areas ***
 Format  AA,AC,AE.

 Record  11111003ARTHUR              DENT

 Search

  Value

    ISN
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  Main  Exit             Char  Hex   View  Prnt  Run   Init  Canc
```

On the ADACALL main screen, specify the necessary parameter values and execute the Adabas command by either choosing PF10 (Run) or entering the ADACALL command `EXEC` in the Command line.

In the example screen above, the Adabas command `L3` was executed for a logical read of the employees file.

Except for the control block, which is shown in full, only a part of the buffer is displayed. You can view the buffers in their entirety by using any of the ADACALL direct commands or PF keys listed below.

ADACALL Parameters

The parameters which can be specified on the ADACALL main screen are listed below. You can use the ADACALL online help function to obtain a summarized explanation of the parameters.

To invoke the online help function

- Place the cursor in the field for which you require help and enter a question mark (?) or choose PF1. (For read-only fields, only PF1 applies.)

For detailed information, see the Adabas documentation *Command Reference* and *Messages and Codes*.

Parameter	Explanation
Mode	Indicates the display mode of the buffer contents: `Char` Character values. `Hex` Hexadecimal values. To change modes, see the ADACALL commands `CHAR` and `HEX`.
Call No.	Number of commands executed since the start of the session.
First Byte	The first byte of the Adabas control block. Indicates whether 1-byte or 2-byte database IDs (DBID) and file numbers (FNR) are used: H’00’ = 1-byte DBID, FNR (file numbers 1 - 255) H’30’ = 2-byte DBID, FNR (file numbers greater than 255)
Cmd	Adabas command. Enter and execute the Adabas `OP` command to specify the parameters described in the relevant section below.
Cmd ID	Command ID.
File	File number. If **First Byte** is set to `H'00'`: 3-digit file number, **Database** not equal to 0. If **First Byte** is set to `H'30'`: 5-digit file number.
Database	Database ID (DBID). Defaults to the DBID of the FUSER file of the current Natural session (see **File** above). If **First Byte** is set to `H'30'`, then the database number will be moved to the response code field of the Adabas control block at execution time.
Resp	Response code returned after the command is executed.
ISN	Internal sequence number.
ISQ	ISN quantity.
ISL	Lowest ISN value for ISN lists.
FBL	Format buffer length in bytes (maximum 210).
RBL	Record buffer length in bytes (maximum 980).

Parameter	Explanation
SBL	Search buffer length in bytes (maximum 140).
VBL	Value buffer length in bytes (maximum 140).
IBL	ISN buffer length in bytes (maximum 200).
COP1	Command option 1.
COP2	Command option 2.
User Area	User area for the control block.
Cmd Time	The time taken to execute the command, converted to 1/100th seconds for convenience.
Addition1	Additions 1.
Addition2	Additions 2. If the call was successful, it displays the compressed length of the record being read and the decompressed length of the data requested via the format buffer. If a non-zero response is returned and the error was a result of an invalid format buffer, the field in error and its offset into the format buffer are displayed.
Addition3	Additions 3.
Addition4	Additions 4. If a VSAM file is being read, this field is set to VSAM if initialized.
Addition5	Additions 5.
Format	Format buffer. (The final period is necessary.)
Record	Record buffer.
Search	Search buffer. (The final period is necessary.)
Value	Value buffer.
ISN	ISN buffer.

Adabas OP Command

When you execute the Adabas command `OP` (Open), ADACALL provides a window where you can specify the following parameters:

- maximum ISNs to be stored in the internal ISN buffer,
- maximum records permitted in hold status,
- maximum CIDs (command IDs) which may be active,
- maximum time permitted for execution of an `Sx` command.

In the window, enter the relevant information and choose ENTER.

For an explanation of the parameters and valid values, refer to the *Adabas Command Reference* documentation.

ADACALL Commands and PF Keys

The ADACALL direct commands listed below are provided to change ADACALL parameter settings or to switch between screens by either entering a command in the Command line or choosing a corresponding PF key.

In addition to ADACALL commands, from the Command line, you can also issue Natural system commands.

In the following table, an underlined portion of a command represents an acceptable abbreviation.

Command	PF Key	Function
	PF1	Invoke the help function for ADACALL. If the cursor is positioned on one of the various ADACALL parameters and PF1 is pressed, help information on this parameter is displayed.
	PF2	Return to the ADACALL main screen. **Mode** is set to CHAR.
BACK	PF5	Page backward to the previous buffer when viewing the buffers in their entirety. Valid only after the VIEW command has been applied, which means that the command is not applicable from the ADACALL main screen.
CB		Display the control block buffer entirely; valid in hexadecimal mode only.
CHAR	PF6	Change the current mode to character mode (EBCDIC).
D		Display extended error message text for response code received. When an Adabas response other than 0 (zero) is returned, the corresponding short error message text is displayed in the message line. The extended text can be viewed by issuing this command.
EXEC or RUN	PF10	Execute the direct command with the parameters specified.
EXIT or STOP or Q or .	PF3 or PF12	Exit. If pressed while on the ADACALL main screen, ADACALL is terminated. If one of the buffer screens is being viewed, the ADACALL main screen is displayed with **Mode** unchanged.
FB		Display the format buffer in its entirety.

Command	PF Key	Function
FWD	PF4	Page forward to the next buffer when viewing the buffers in their entirety. Valid only after the VIEW command has been applied, which means that the command is not applicable from the ADACALL main screen.
HEX	PF7	Change the current mode to hexadecimal.
IB		Display the ISN buffer in its entirety.
INIT	PF11	Initialize/reset buffer(s). A window is displayed and one of the following values can be entered for the buffers indicated: H — Initialize the corresponding buffer(s) with binary zeroes (H'00'). any character except H or blank — Initialize the corresponding buffer(s) with blanks (H'40'). blank character — Do not initialize the corresponding buffer(s). If you enter INIT ALL, all buffers except the control block are initialized with blanks. Alternatively, the command INIT FB RB SB VB IB (not all buffers need be listed) can be specified and all buffers in the list are initialized with blanks. **Note:** The ISN buffer is always initialized with binary zeroes.
PRINT	PF9	Generate and display a report on the status of all buffers. The Natural terminal command %H can be used to obtain a hardcopy.
RB		Display the record buffer in its entirety.
RUN		Same as EXEC.
SB		Display the search buffer in its entirety.
VB		Display the value buffer in its entirety.

Command	PF Key	Function
VIEW	PF8	Display all buffers in their entirety. The first buffer to be displayed is the record buffer. The FWD command can be used to page through the other buffers. If you VIEW the record buffer in hexadecimal mode, the data are displayed on four pages: To page forwards, enter the command FWD or choose PF4. To page backwards, enter the command BACK or choose PF5. To display a specific page, enter a page number from 1 to 4 in the field **Specify next page number**. To view buffers individually, enter any of the following commands: FB Format buffer RB Record buffer SB Search buffer VB Value buffer IB ISN buffer CB Control block (default). Valid in hexadecimal mode only: change to HEX before executing VIEW.
VSAM		If VSAM has been defined for the current Natural session, this direct command can be issued to access or update VSAM files. When you issue this command, you are prompted by a window for the VSAM file name. When the command is executed, it is directed to the appropriate VSAM file.

User Exit ADAEXIT

ADACALL allows direct commands to be issued to any database. Therefore, as a means of security, a user exit is supplied. This user exit is called ADAEXIT and is contained in the library SYSADA. You can modify ADAEXIT as required. The Adabas control block is passed as a parameter to ADAEXIT. You can change the source code of the user exit so as to modify the contents of the control block. By simply

changing the database ID or file number, or by setting the Command Code to XX, you can prevent database calls from being performed.