

ADABAS D

C / C++ Precompiler for Windows 95



This document is applicable to ADABAS D Version 6.1.1 PE and to all subsequent releases, unless otherwise indicated in new editions or technical newsletters.

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

Readers' comments are welcomed. Comments may be addressed to the Documentation Department at the address on the back cover.

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1 ADABAS D Personal Edition

1.1 Using the C/C++ Precompiler with Windows 95

This document describes the usage of the C/C++ precompiler with Windows 95. A complete description of the C/C++ programming interface can be found in the C/C++ Precompiler Manual.

Setting the Environment Variables INCLUDE and LIB

The precompiler libraries of ADABAS D are stored in *%DBROOT%\Lib*, the include files in *%DBROOT%\Incl*.

Therefore the environment variables INCLUDE and LIB must be extended in the following way before the precompiler can be used:

```
SET INCLUDE=%INCLUDE%;%DBROOT%\Incl
SET LIB= %LIB%;%DBROOT%\Lib
```

Special Features

The virtual terminal uses standard input and standard output for applications that call QUERY or REPORT. To avoid uncontrolled input/output, the application's input/output should not be programmed using standard input/standard output.

C/C++ Precompiler Call and Options

```
cpc <precompiler options> <fn> <compiler options>

<fn> ::= filename
```

The name of the source code file must be <fn>.cpc.

C/C++ precompiler options:

```
ansi c      :: -E cansi
c++         :: -E cplus
cachelimit  :: -y <cache limit>
check nocheck :: -H nocheck          (default: -H check)
      syntax :: -H syntax
comment     :: -o
compatible  :: -C
datetime europe :: -D eur
      iso    :: -D iso          (default: -D internal)
      jis    :: -D jis
      usa    :: -D usa
extern      :: -e extern
help        :: -h
isolation level :: -I <isolation level> (default: -I 10)
list        :: -l
margins     :: -m <lmar, rmar>         (default: -m 1,132)
nowarn      :: -w
precom      :: -c
profile     :: -R
program     :: -P <progname>          (default: -P <filename>)
serverdb    :: -d <serverdb>
servernode  :: -n <servernode>
silent      :: -s
sqlmode adabas :: -S adabas
      ansi  :: -S ansi
      db2   :: -S db2
      oracle :: -S oracle
timeout     :: -t <timeout>
trace file  :: -F <tracefn>
      long  :: -X
      short :: -T
user        :: -u <usern>,<passw>
```

```
userkey      :: -U <userkey>
version      :: -V
```

For an explanation of the different precompiler options, see the ADABAS C/C++ Precompiler Manual.

Compiler option: see information about the corresponding C compiler

Set is: -c

Sample call: `cpc -u DBUSER,DBPWRD test`

Additional connect data is fetched for the corresponding session from the connect command specified in the program and/or from the XUSER file. If no XUSER file is available, all connect data must be specified using the precompiler options. These options are only valid for session 1.

Compiling the Precompiled C/C++ Program

Presently, only the Microsoft Visual C++ compiler is supported under Windows 95.

```
cl compiler options <fn>.c
```

A source file saved after its precompilation can be compiled in the usual way with cl. All compiler options are allowed. -c is the default option for the icc call implicitly made by cpc.

Linking the Compiled C/C++ Program

The programs are linked with the Windows 95 linker LINK (for specific options, see the LINK documentation).

Note that the libraries `%DBROOT%\LIB\cpplib.lib`, `%DBROOT%\LIB\sqlpcr.lib`, and `%DBROOT%\LIB\ptocnt.lib` must be linked to the programs.

Executing the Linked C/C++ Program

Options are passed to the program in the environment variable SQLOPT.

Example:

```
SET SQLOPT=-X -d MyDatabase
```

<fn>

Enter the command <fn> on the screen to execute the linked program.

C/C++ Precompiler Options

```
cachelimit           :: -y <cache limit>
isolation-level      :: -I <isolation level>
mfetch               :: -B <number>
no select direct fast :: -f
profile              :: -R
serverdb             :: -d <serverdb>
servernode           :: -n <servernode>
timeout              :: -t <timeout>
trace alt            :: -Y <statement count>
    file              :: -F <tracefn>
    long              :: -X
    no date/time      :: -N
    short             :: -T
    time              :: -L <seconds>
user                 :: -u <usern>,<passw>
userkey              :: -U <userkey>
```

For an explanation of the different precompiler options, see the ADABAS C/C++ Precompiler Manual.

C/C++ Precompiler Input/Output Files

<fn>.pcl:	Precompiler source and error listing.
sqlerror.pcl:	ADABAS error file. This file is output when errors occur before the file '<fn>.pcl' has been opened.
<fn>.obj:	Object module. Linked to an executable module with other object modules and the runtime system.
<fn>.pct:	Trace file. It contains the performed SQL statements.
<fn>.c:	The precompiled application program.
<fn>.w1:	Precompiler work file.
<fn>.w2:	Precompiler work file.
<fn>.w3:	Precompiler work file.

Calling Operating System Commands

Windows 95 commands and executable programs can be called using the command "exec command ...".

Examples:

<code><command> := ' cmd /c dir /p'</code>	displays the current directory
<code><command> := ' print out '</code>	prints the file 'out'
<code><command> := ' pgm1 > pgm1.lis'</code>	starts the program 'pgm1' writing the results to the file 'pgm1.lis'.

C/C++ Precompiler Include Files

The precompiler generates the preprocessor directive "#include %DBROOT%\incl\cpc.h". This file contains all declarations required for the translation of a C/C++ program.

Sample Programs

Examples of simple C precompiler programs can be found under %DBROOT%\Samples\C. The samples makefile *pcdemo.mak* can be used to develop applications of your own.

2Index

- C -

C/C++ precompiler.....	1-1
C/C++ precompiler, options.....	1-2
C/C++ precompiler, samples.....	1-6
call, C/C++ precompiler.....	1-2
compiling, C/C++ program.....	1-3
cpc.....	1-2

- E -

exec command, C/C++ precompiler.....	1-6
executing, C/C++ program.....	1-4

- I -

I/O files, C/C++ precompiler.....	1-5
include files, C/C++ precompiler.....	1-6

- L -

linking, C/C++ program.....	1-3
-----------------------------	-----

- O -

operating system commands, C/C++ precompiler.....	1-6
---	-----

- R -

runtime options, C/C++ precompiler.....	1-4
---	-----

- S -

SQLOPT.....	1-4
system commands, C/C++ precompiler.....	1-6

Table of Contents

1	ADABAS D Personal Edition.....
1.1	Using the C/C++ Precompiler under Windows 95.....
1.1.1	Setting the Environment Variables INCLUDE and LIB.....
1.1.2	Special Features.....
1.1.3	C/C++ Precompiler Call and Options.....
1.1.4	Compiling the Precompiled C/C++ Program.....
1.1.5	Linking the Compiled C/C++ Program.....
1.1.6	Executing the Linked C/C++ Program.....
1.1.7	C/C++ Precompiler Options.....
1.1.8	C/C++ Precompiler Input/Output Files.....
1.1.9	Calling Operating System Commands.....
1.1.10	C/C++ Precompiler Include Files.....
1.1.11	Sample Programs.....
2	Index.....

