

Siemens Business Services GmbH & Co. OHG

DRIVE/WINDOWS-COMP (BS2000) V2.1B

Edition: June 2000

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1 General

This Release Notice is a summary of the major dependencies and operating information with respect to

DRIVE/WINDOWS-COMP (BS2000 *) V2.1

*4 The release level is that of June 2000

DRIVE/WINDOWS-COMP V2.1 is an additional product to DRIVE/WINDOWS V2.1, in order to make DRIVE applications running more performantly. Such an application should be tried first in interpreter mode, as far as it works correct. The advantages of the interpreter mode for the interactive generation and test can therefore be used completely.

DRIVE/WINDOWS V2.1 is the follow-up version of DRIVE/WINDOWS-DB V1.1.

DRIVE programs for newstyle and oldstyle, already existing, may be compiled further with DRIVE/WINDOWS-COMP.

The DRIVE compiler is called as a subroutine of the DRIVE interpreter within TIAM or UTM mode. The compiler options, which are required, are specified with the command COMPILER or they are part of the source. The source to be compiled is read by the compiler out of an PLAM library.

The compiler generates an object module out of the drive program. In addition there is generated a data module for the main program in TIAM mode.

For the product use of compiled applications on remote computers in BS2000 the runtime system of the DRIVE compiler can be ordered separately.

This Release Notice is also supplied as a file in uppercase/lowercase.

If subsequent changes are made, this file will be updated. Changes will be marked with (*n) in the columns 2 and 3.

Update editions:

*1	*1	release level	January	1997
*2	*2	release level	December	1997
*3	*3	release level	November	1998
*4	*4	release level	June	2000

This file can be printed out by means of:

```
/PRINT-FILE FILE-NAME=SYSFGM.DRIVE-COMP-DOC.021.D,-
CONTROL-CHARACTERS=EBCDIC (CONTROL-CHAR-POS=STD)
```

*4 *) BS2000 is a registered trademark of Fujitsu Siemens Computers

1.1 Ordering

*4 DRIVE/WINDOWS-COMP V2.1 or DRIVE/WINDOWS-COMP-LZS V2.1
 *4 can be ordered from your local distributor
 of Fujitsu Siemens Computers.
 DRIVE/WINDOWS-COMP V2.1 is subject to the general terms and
 conditions for the purchase, use and maintenance of
 software products.

1.2 Delivery

DRIVE/WINDOWS-COMP V2.1 files are supplied via SOLIS

The SOLIS delivery letter lists the valid file and
 volume attributes.

A list of the delivery parts you will find in the table
 in section 2.6 .

1.3 Documentation

The following manuals are included in the package for
 DRIVE/WINDOWS-COMP V2.1:

Title	Order number
DRIVE/WINDOWS-COMP (BS2000) V2.1 Benutzerhandbuch (German)	U21453-J-Z125-2
DRIVE/WINDOWS-COMP (BS2000) V2.1 User Guide (English)	U21453-J-Z125-2-7600

Note: - Please regard also the section
 "Supplement to the manual"
 in the file SYSRME.DRIVE-COMP-DOC.021.E
 which is included in the delivery of
 DRIVE/WINDOWS-COMP .
 - The manuals for the DRIVE interpreter
 may be ordered separately.

2 Technical information

2.1 Resource requirements

The minimum virtual address space required for
 a compilation (newstyle) without interpreter is: 1.6 MB

For the virtual address space required by the interpreter
 see release notice DRIVE/WINDOWS (BS2000) V2.1

2.2 Software configuration

The following software requirements apply to the use of DRIVE/WINDOWS-COMP (BS2000) V2.1:

Operating system	BS2000 V10.0 (without shared loading) BS2000/OSD V1
Runtime system	as of CRTE V2.0A
DC interface	as of UTM V3.3B UTM-D V2.0 (for DTP operation)
Format handling system	as of FHS V8.1
Editor	as of EDT V16.4
Data access system	as of LMS V3.0 UDS/SQL V1.2, optional SESAM/SQL V1.1A80, optional SESAM/SQL V2.1B00, optional
DRIVE interpreter	DRIVE/WINDOWS V2.1B

*1

2.3 Product installation

*4 There is recommended to do the installation of the product
 *4 with the installation monitor IMON.
 *4 As of OSD-SVP V2.0 or BS2000/OSD V3.0 (with IMON V2.2)
 *4 respectively the installation with IMON is obligatory.

2.4 Product use

1. Preparation for the use of the compiler

There is no installation required.

Previous versions of the software parts in section 2.2 (e.g. ILCS V1.4, LMS V2.0) have to be removed out of the subsystem. This holds even, when no use of the actual interpreter or compiler as a part of the subsystem is intended.

2. Preparation for the use with DSSM/SCCM

For the newstyle and oldstyle compiler no use with DSSM/SCCM is supported.

For the runtime system of the newstyle compiler the product installation is recommended with SCCM like for the newstyle interpreter provided that BS2000 is used as of version OSD V1. Since the appropriate module has LLM format there is no installation process necessary.

For the oldstyle interpreter together with the runtime system of the oldstyle there is as in the past an installation process required for the use with DSSM:

The procedure PREPARE.RTS.DSSM
within the library SINPRC.DRIVE-COMP-LZS.021.OLD
generates for use in the declaration file for DSSM
the library SYSLNK.DRIVE-COMP.021.COMP.DSSM .

The parameters of the procedure have to be updated if necessary. The procedure ist described within the procedure source.

*4 If the oldstyle compiler is to be used, the oldstyle interpreter
*4 must be loaded into the subsystem DRIVE only together
*4 with the runtime system of the oldstyle compiler;
*4 otherwise the starting of the oldstyle compiler will be
*4 interrupted because of Unresolved Externals DR@#HE2C etc.

3. Parallel object mode of V1.1 and V2.1 with DSSM

A parallel mode of the versions V1.1 and V2.1 with DSSM is possible for newstyle without any restrictions.

As oldstyle is concerned, only the components of one of both the versions either V1.1 or V2.1 can be shared loaded:

- If components of the runtime system of the oldstyle compiler V2.1 are shared loaded, there also are to be replaced the modules DRTDAT10, DRTCOD10, DRTMAT10 in the library for the runtime system of V1.1
 SYSLNK.DRIVE-COMP.011.RTS
by those of the library for the runtime system of V2.1
 SYSLNK.DRIVE-COMP-LZS.021.OLD .

*4

4. Deinstallation of DRIVE/WINDOWS-COMP

Before taking the newstyle components and, if wanted, the oldstyle components of interpreter and runtime system of V2.1 into the subsystem the according components, which are already present in the subsystem, have to be removed out of the subsystem.

5. Transfer via DSSM/SSCM

- SSCM (newstyle)

One of the delivered declaration files for SSCM

- SYSSSC.DRIVE-COMP-LZS.021.NXS

- SYSSSC.DRIVE-COMP-LZS.021

is inserted into the catalogue for the subsystem.

*3 While generating the subsystem DRTS21 the message

*3 SCM4153 Incompatible SSC-OBJ-FILE SYSSSC.DRIVE-COMP-LZS.021

*3 means that the version of sscm on the target system

*3 and the version of sscm, which was applied for the SSC-OBJ-FILE,
*3 are not compatible.

*3 The SSC-OBJ-FILE then has to be generated once more

*3 using the declaration procedure in SYSPRC.DRIVE-COMP-LZS.021.

- DSSM (oldstyle)

The contents of the generated library

SYSLNK.DRIVE-COMP.021.COMP.DSSM

is taken into the subsystem

via one of the delivered declaration files for DSSM

- SYSSSD.DRIVE-COMP-LZS.021.NXS

- SYSSSD.DRIVE-COMP-LZS.021

- SYSSSD.DRIVE-COMP-LZS.021.CL5

2.5 Obsolete functions and those to be discontinued

- TOM-REF connection

- ISOSQL support

2.6 Incompatibilities

For the change from DRIVE/WINDOWS-COMP V1.1
(or from the interpreter DRIVE/WINDOWS V1.1 respectively)
to DRIVE/WINDOWS-COMP V2.1
the following items should be regarded:

1. Changes in generation of objects with relevance on existing DRIVE programs

- data type NUMERIC printable
For the data type NUMERIC the sign which is internally stored, is now normalized, so that for a non-negative value also the last byte represents always a printable digit. Existing program code for display of data with type NUMERIC must be checked!
- Alignment for CHARACTER on DRIVE variables
For the function CHARACTER without mask on a numeric DRIVE variable the alignment of the result is adjusted to the interpreter mode.

2. Compilation

- *4 - All the newstyle programs have to be recompiled
- *4 for this release level !!
The compiler option VERSIONMIX has become meaningless.

For use of the new feature

CALL for an oldstyle program,
there have to be recompiled all the oldstyle programs,
where after passing the statement CALL

- the statement END PROCEDURE is reached,
- the statement STOP [WITH tac] is reached.

- During the compilation process a scratch file is generated with linkname IDCHPLAM and filename S.DRIVE-COMP.suffix .
At normal end of the compilation process this file will be erased.
At abnormal end such a file may remain and then has to be erased by the user.

- *4 - After a compilation process
- *4 before starting a tiam or utm application
- *4 there have to be released
- *4 all the TFT entries for the linknames BLSLIBnn,
- *4 as otherwise there is loaded from wrong libraries
- *4 during the starting process.
- *4 A remaining TFT entry for BLSLIBmm for the library
- *4 of the DRIVE compiler leads to
- *4 CSECT 'IDCHCHK' IN LLM 'DRCLLM21' IS DUPLICATE.
- *4 PROCESSING ABORTED

3. Generation and run of TIAM / UTM applications

- In control and start procedures the filenames and access modes have to be adjusted according to the table delivery parts.
- The linkname DRTOML now holds only for the library of the runtime system of the oldstyle compiler.
- Applications in the DRIVE mixed mode including the oldstyle interpreter must contain the components of the runtime system of the oldstyle compiler even for the case if no oldstyle objects are included.
- KDCDEF

All the programs connected to UTM in an newstyle application DRTROOT, DRIVROOT , DRTSTART, DRTSHUT, DRTVORG are contained as entries in the package IDCSMAIN; in the PROGRAM statement there is to be specified COMP=ILCS, the operand LIB has to be omitted.
The programs connected to UTM for DRIVE mixed mode EXSTRT, EXSHUT are entries; in the PROGRAM statement there is to be specified COMP=ILCS, the operand LIB has to be omitted.
the appropriate MODULE statements have to be given for EXSTART and EXSHUTE.

- Bind and start

There is used the BINDER for binding and the BLS for loading and starting of LLM elements.

The following libraries have to be assigned with LINK=BLSLIBnn :

*4 crtelib , lmslib , fhs-macrolib , and tiam-macrolib .

For the run of a TIAM application there is also required an assignment on the lmslib (Attention: Error in the manual, correct in the reference procedures).

If one of these assignments is missing, the start process is aborted due to unsatisfied external references.

The command for starting an LLM element reads

```
/START-PROGRAM FROM-FILE=*MOD(LIB=applilib,           -
/                               ELEM=appliname, PROG-MODE=progmode, -
/                               RUN-MODE=ADV(ALT-LIB=YES,      -
/                               NAME-COL=ABORT,              -
/                               SHARE-SCOPE=NONE,            -
/                               UNRES-EXTRNS=DELAY,          -
/                               LOAD-INF=REF))
```

Mind the position of the brackets (Attention: Error in the manual, correct in the reference procedures).

```
progmode = ANY   for XS mode
progmode = 24    for NXS mode
```

If one of the following operands is missing,

```
ALTERNATE-LIBRARIES=YES,
UNRESOLVED-EXTRNS=DELAY,
LOAD-INFORMATION=REFERENCES
```

the start process is aborted due to unsatisfied external references.

*3 4. Changes in UTM applications
 *3 as compared to the manual of the oldstyle compiler

*3 The remarks are valid for UTM V3.3 and SESAM/SQL V1.1
 *3 and are already included in the reference procedures.

*3 generation procedure

	manual	reference procedure
*3 &UTMLIB	KDC.DLL.OML	SYSLNK.UTM.033
*3 &DRIVELIB	SYS.MOD.GEN.DRIVE	SYSLNK.DRIVE.021
*3 &DRTRTSLIB	SYS.MOD.DRTRTS	SYSLNK.DRIVE-COMP-LZS.021.OLD
*3 &FORMOML		necessary for the start procedure
*3	KDCDEF	SYSPRG.UTM.033.KDCDEF
*3	MODULE DRTCOD10	MODULE DRTCOD10
*3	---	ENTRY statements 1)
*3	MODULE DRTPCS10	MODULE DRTPCS10
*3	---	ENTRY statements 1)
*3 NXS / XS	MODULE SF2REFM	MODULE SF2REFM / SF2REFX
*3	MODULE SESUTMC	MODULE SESUTMC / SESUTMX
*3	MODULE SESORT	MODULE SESORT / SESORTX
*3 UTM macros	UTM.MACLIB	SYSLIB.UTM.033.ASS
*3 macro KDCDB	SYS.MAC.UTM	SYS.MAC.UTM from SESAM userid
*3	UTM.OML.SPLRTS	SYSLNK.UTM.033.SPLRTS

*3 start procedure

	manual	reference procedure
*3	/FILE SYS.MOD.DRTRTS,	/FILE SYSLNK.DRIVE-COMP-LZS.021.OLD
*3	LINK=DRIVEOML	LINK=DRTOML
*3	/SYSFILE TASKLIB=	/FILE SYSLNK.DRIVE.021,
*3	SYS.MOD.DRIVE	LINK=DRIVEOML
*3	.FHS MEMLEN=31	.FHS DE=NO
*3	1) Missing or incomplete ENTRY statements	
*3	cause the module DRTCOD10 / DRTPCS10	
*3	to be loaded for a second UTM task once more,	
*3	though it is already in the common memory pool.	

*4 5. Changes in UTM applications
*4 due to UTM V4.0

*3		UTM V3.3	UTM V4.0
*3	UTM version in filenames	033	040
*3	KDCDEF	PROGRAM KDCADM, COMP=SPL4	COMP=ILCS
*3		USER CHEF, STATUS=ADMIN	PERMIT=ADMIN
*3	linkage (oldstyle applications) ---		RESOLVE ,&CRTELIB
*3			mit &CRTELIB=
*3			SYSLNK.CRTE.021

*4 6. Changes in UTM applications
*4 due to UTM V5.0

*4		UTM V4.0	UTM V5.0
*4	UTM version in filenames	040	050
*4	Note that UTM V5.0 requires BS2000/OSD as of V3		

```

*4          7. Changes in TIAM and UTM applications
*4          due to SESAM/SQL V2.2

*3          SESAM/SQL V1.1      SESAM/SQL V2.2      1)

*4 tiam application

*4 Bind          //INCLUDE-MODULE      ---
*4              LIB=&DRIVELIB,
*4              ELEM=DRIDUM21,
*4              TYPE=R

*4              //INCLUDE-MODULE      //INCLUDE-MODULE
*4              LIB=&SESAMOML,          LIB=&SESAMOML,
*4              ELEM=SESDCAMX,          ELEM=SESMOD,
*4              TYPE=R                  TYPE=R

*4 utm application

*3 KDCDEF        DATABASE          ENTRY=SESAM          ENTRY=SESAM
*3              ,TYPE=SESAM          ,TYPE=SESAM
*3              [,LIB=&SESAMOML]      [,LIB=&SESAMOML]

*3              MODULE          SESUTMC / SESUTMX      SESUTMC
*3              ,LIB=&SESAMOML      ,LIB=&SESAMOML
*3              ,LOAD=STATIC        ,LOAD=STATIC

*3              MODULE          SESORT / SESORTX      SESORT
*3              ,LIB=&SESAMOML      ,LIB=&SESAMOML
*3              ,LOAD=STATIC        ,LOAD=STATIC

*3 lib for macro KDCDB          SYS.MAC.UTM          SIPLIB.SES-SQL-GEM.022.
*3                               MACUTM

*3 UTM start procedure          /FILE &SESAMOML,    /FILE &SESAMOML,
*3                               LINK=SESAMOML          LINK=SESAMOML

*3          .SESAM DBSESNAM=X      ---                2)
*3          .SESAM DBSESPUF=32000  ---

*3          ---                    /FILE &SESCONF,      2)
*3                               LINK=SESCONF

```

```

*3          1) Before use of SESAM/SQL V2.2
*3          existing SESAM databases
*3          of a version earlier than SESAM/SQL V2.0
*3          have to be transformed on the new SESAM layout
*3          (s. release notices of SESAM/SQL as of V2.0).

```

```

*3          2) As of SESAM/SQL V2.2 there is obligatory the use of
*3          a configuration file for the SESAM start parameters;
*3          they must not be contained in the utm start procedure
*3          any more.

```

Table: Delivery parts

delivery part	meaning	access mode
SYSLNK.DRIVE-COMP.021	newstyle compiler	link BLSLIBnn
SYSLNK.DRIVE-COMP.021.OLD	oldstyle compiler	link DRICPOML
*4 SYSSII.DRIVE-COMP.021	installation file	
SYSLNK.DRIVE-COMP-LZS.021	- object for PERMIT display for SESAM or UDS, - mathem. routines	in UTM mode: like objects, in TIAM mode: link BLSLIBnn
*3 SYSPRC.DRIVE-COMP-LZS.021	reference procedures and declaration procedures for SSCM newstyle	
*3		
SYSSSC.DRIVE-COMP-LZS.021.NXS	declaration files	
SYSSSC.DRIVE-COMP-LZS.021	for SSCM newstyle	
SYSLNK.DRIVE-COMP-LZS.021.OLD	rts oldstyle compiler	link DRTOML
SYSFHS.DRIVE-COMP-LZS.021.OLD	system formats oldstyle	
SYSLIB.DRIVE-COMP-LZS.021.OLD	user interface oldstyle	
SYSPRC.DRIVE-COMP-LZS.021.OLD	reference procedures oldstyle	
SINPRC.DRIVE-COMP-LZS.021.OLD	installation procedure for DSSM oldstyle	
SYSSSD.DRIVE-COMP-LZS.021.NXS	declaration files	
SYSSSD.DRIVE-COMP-LZS.021	for DSSM oldstyle	
SYSSSD.DRIVE-COMP-LZS.021.CL5		
*4 SYSSII.DRIVE-COMP-LZS.021	installation file	
SYSGM.DRIVE-COMP-DOC.021.D/E	release notice (German/English)	
SYSRME.DRIVE-COMP-DOC.021.D/E	readme file (German/English)	
*4 SYSSII.DRIVE-COMP-DOC.021	installation file	

2.7 Restrictions

- Functions of DRIVE, which are not supported by the DRIVE compiler, are mentioned in the manual (German edition) in the section " Abweichungen zwischen Interpreter und Compiler ".
- As to arithmetic operations there are recommended also tests in object mode for suitable declarations of the variables.
- During the compilation of large DRIVE programs there may be reached an internal limit for the compiler. When this limit is exceeded, the compilation is aborted with the message DRI0300 .
Measurement:
OPTION NULLVALUE=OFF , SCREENCHECK=OFF (if FHS),
otherwise splitting of the DRIVE program
- The number of SUBPROCEDURE statements and / or CYCLE FOR statements with variable step value and / or end value is limited within a DRIVE program by an address space of 32 KB for appropriate internal variables. When this limit is exceeded, the compilation is aborted with the message DRI0303 .
- For a statement in a DRIVE program containing a complex expression the address space for all the intermediate results with length less than 8 bytes is limited by 4 KB. When this limit is exceeded, the compilation is aborted with the message DRI0304 .
In this case the line number with respect to the expanded source will be displayed.
Measurement:
OPTION NULLVALUE=OFF ,
otherwise splitting of the statement in several statements
- The statement CASE ALL case-expr ; where case-expr is not an elementary variable but an expression, causes a wrong flow control during runtime in utm mode. The version V1.1 has the same behaviour.
*4 The wrong behaviour is removed in this version.
- For operations between different data types out of
*4 DATE, TIME, TIME(3), TIMESTAMP(3)
*4 there should be used the appropriate conversion function
*4 DATE or TIME or TIMESTAMP respectively,
*4 as without use of the appropriate conversion function
*4 the interpreter mode and the object mode may have
*4 different results.

2.8 Procedure in the event of errors

The following documents are required for diagnosis in the event of errors:

a) for errors during compilation:

- description of the phenomena,
- source of the DRIVE program,
- *4 - for programs containing DB accesses there is required the configuration of the database,
- list of the compiler options used,
- format and module libraries, if necessary,

b) for errors in the compiled application during runtime:

- description of the phenomena,
- source of the DRIVE program,
- protocols of SYSOUT and SYSLST for all the UTM tasks of the application,
- UTM dumps and USER dumps, if any,
- *4 - for programs containing DB accesses there is required the configuration of the database,
- list of the compiler options used (MONINFO=ON),
- protocol of the compilation (LISTING=LIST, LISTTYPE=USER),
- format and module libraries, if necessary,

3 Software extensions

DRIVE/WINDOWS-COMP V2.1 is based on the scope of the language of the appropriate interpreter DRIVE/WINDOWS V2.1 for the program mode. Extensions are corresponding those of the interpreter besides of the restrictions mentioned above.

- *3 The character X'9F' which was invalid upto now,
- *3 is considered as a valid letter and is reserved for the EURO.

For the oldstyle mode there is valid furtheron the scope of the language and the behaviour of the DRIVE compiler V1.0 .

- *3 The character X'9F' which was invalid upto now,
- *3 is considered as a valid letter and is reserved for the EURO.

- *4 As of the release level of November 1998
- *4 the ability for Y2K is assured.
- *3 The software configuration required is different from
- *3 that of section 2.2.



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