FUJITSU

FUJITSU Software BS2000 LMS

Version 3.5B
June 2020

Release Notice

1   General

LMS (Library Maintenance System) is the central library management system with which BS2000 creates and administers libraries and also processes the elements they contain.

*05   This Release Notice is a summary of the major extensions, dependencies and operating information with respect to LMS V3.5B31 under the BS2000 operating system.

*05   The release level is that of: June 2020

*05   Changes to LMS V3.5B10 are marked with *05.
*04   Changes to LMS V3.5B01 are marked with *04.
*03   Changes to LMS V3.5A20 are marked with *03.
*02   Changes to LMS V3.5A11 are marked with *02.
*01   Changes to LMS V3.5A02 are marked with *01.

This and other current Release Notices are shipped on the SoftBooks DVD and are available online at https://bs2manuals.ts.fujitsu.com.

If one or more previous versions are skipped when this product version is used, the information from the Release Notices (and README files) of the previous versions must also be noted.

1.1   Ordering

*03   LMS V3.5B can be ordered from your local distributors.

*03   LMS V3.5B is supplied subject to a single payment or payment by installments.

1.2 Delivery

*03   The LMS V3.5B files are supplied via SOLIS.

*03   The following delivery groups are part of the LMS V3.5B delivery scope:

LMS	Starter phase (ISP interface)
LMSSDF	Starter phase (SDF interface)
SYSACF.LMS.035	Alias catalog for LMSLIB
SYSLIB.LMS.035	Subroutine interface
SYSLNK.LMS.035	LMS module library
SYSMES.LMS.035	System message file
SYSNRF.LMS.035	NoRef file
SYSRMS.LMS.035	Correction depot for RMS
SYSSDF.LMS.035	SDF Syntax file
SYSSII.LMS.035	Structure information for IMON
SYSSSC.LMS.035	SSCM declarations

The current file and volume characteristics are listed in the SOLIS2 delivery cover letter.

1.3   Documentation

*03   The following documentation is available for LMS V3.4B and suitable for LMS
            V3.5B as well:

            User Guide SDF Format   U8326-J-Z125-6-76
            User Guide Subroutine Interface   U6167-J-Z125-6-76

            Please use the order numbers below for manuals in German:

            Benutzerhandbuch SDF-Format   U8326-J-Z125-6
            Benutzerhandbuch Unterprogramm-Schnittstelle   U6167-J-Z125-6

            The BS2000 documentation is available in German and English on DVD with the
            title BS2000 Softbooks.

            The documentation is also available on the internet at
            https://bs2manuals.ts.fujitsu.com. Manuals which are displayed with an order
            number can also be ordered in printed form.

*03   The user guides for LMS V3.4B are supplemented with README files. These
            contain changes and extensions of LMS V3.5B.

            The README files are available on the Softbooks-DVD or online under
            https://bs2manuals.ts.fujitsu.com.

2 Software extensions

Statement EDIT-ELEMENT

The statement //EDIT-ELEMENT has now an additional alias called EDIT.

*03   **Store file CHANGE-DATE as element USER-DATE**

*03   The operand USER-DATE of the statement //ADD-ELEMENT has a new val-
*03   ue *BY-SOURCE to take the USER-DATE/TIME of the target element from
*03   the CHANGE-DATE/TIME of the source file.

Support of Last Byte Pointer

The Last Byte Pointer (LBP) of PAM files is preserved if the file is added with //ADD-ELEMENT to a library. //EXTRACT-ELEMENT restores the LBP of those files.

*02   `The output of the statement //SHOW-ELEMENT was extended by LBP`
*02   `information.`

For more information refer to the README file.

File attributes of elements from type C

Optionally it is now possible to preserve the file attributes of elements from type C as well. To do so the statements //ADD-ELEMENT and //MOD-LMS-DEFAULTS has been extended. The value *KEEP of the operand SOURCE-ATTRIBUTES within the structure ELEMENT-ATTRIBUTES is extended by the sub-structure KEEP-TYPES. This is important to preserve a LBP of files from type C.

For more information refer to the README file.

Statement SHOW-LMS-DEFAULT

The clearness of nested values within the output is improved by indentations.

For more information refer to the README file.

*03   **Support of SAM Node Files**

*03   The statements //ADD-ELEMENT and //EXTRACT-ELEMENT can store and
*03   restore SAM node files. The net coded character set name (NETCCSN) is
*03   preserved if the file is added to a library with //ADD-ELEMENT …SOURCE-
*03   ATTRIBUTES=*KEEP. //EXTRACT-ELEMENT restores the NETCCSN of
*03   those SAM node files if file attributes are taken from the member.
*03   The output of the statement //SHOW-ELEMENT was extended by
*03   NETCCSN information.

*03   For more information refer to the README file.

*04   **Statement SHOW-ELEMENT-ATTRIBUTES**

*04   If the members have the attribute DESTROY-DATA=*YES, the output of the
*04   statement //SHOW-ELEMENT-ATTRIBUTES was extended by DESTROY-
*04   DATA information in the SECURITY block.

*04   The statement //SHOW-ELEMENT-ATTRIBUTES with operand
*04   INFORMATION=*DELTA-STRUCTURE can generate structured output to a
*04   variable now.

*04   For more information refer to the README file.

*05   **Support on member type PAM LLM**

*05   The statements //ADD-ELEMENT can add files with format PAM LLM to a
*05   library and //EXTRACT-ELEMENT can extract elements from a library to files
*05   with format PAM LLM.

*05   For more information refer to the README file.

3   Technical information

3.1   Resource requirements

At least 2.2 MB is required for loading LMSSDF in user address space.

Preloading the subsystem occupies 1.2 MB in class 4 memory and 1.2 MB (private part) in user address space.

The memory requirement is a minimum value that may increase depending on the amount of data and application.

3.2   Software configuration

*03

The following versions of the software products used by LMS are required to use the full functionality of LMS 3.5B:

```
         +--------------+------------------------------------+
         | product      | minimum version                    |
         +--------------+------------------------------------+
*01      | BS2000/OSD   | V08.0 with correction package 2/2015 |
         +--------------+------------------------------------+
*03      | BS2000/OSD   | V09.0 with correction package 1/2016 |
         +--------------+------------------------------------+
*03      | OSD/BC       | V10.0 with correction package 1/2016 |
         +--------------+------------------------------------+
*04      | OSD/BC       | V11.0                              |
         +--------------+------------------------------------+
         | openNet Server| V3.3A                             |
         +--------------+------------------------------------+
```

The following software products are required for particular LMS functions:

```
         +--------------+------------------------------------+
         | product      | minimum version                    |
         +--------------+------------------------------------+
         | EDT          | V17.0A                             |
         +--------------+------------------------------------+
         | SDF-P        | V2.5A                              |
         +--------------+------------------------------------+
         | SECOS        | V5.3A                              |
         +--------------+------------------------------------+
```

Programs written in the following languages can use LMS via a subroutine interface:
ASSEMBLER
C
C++
COBOL

3.3   Product installation

Installation of the product LMS with the IMON installation monitor is mandatory. You must follow the information concerning installation in the delivery cover letter and in the product documentation as well as the information in this Release Notice.

Before calling IMON, you must carry out the actions listed in the delivery cover letter as installation requirements.

After these actions have been executed you have to install the product with IMON. The necessary inputs and the sequence of the installation are described in the IMON documentation.

After successful installation of the product with IMON you have to carry out the following actions:

In the case of applications that explicitly require the existence of the file $TSOS.LMSLIB, one of the following alternatives can be used as a workaround:

   a) The application can be patched so that $.LMSLIB is required.
         The alias catalog redirection from SYSACF.LMS.035 then redirects accesses to SYSLNK.LMS.035.

   b) SYSLNK.LMS.035 can be copied to $TSOS.LMSLIB.
         If this method is used, note that the copy operation must be repeated after every correction applied to SYSLNK.LMS.035.

3.4   Product use

 not applicable

3.5   Discontinued functions (and those to be discontinued)

not applicable

3.6 Incompatibilities

Statement FIND-ELEMENT

Some incorrect regular expressions (e.g. containing multiple consecutive duplication symbols) which were accepted as search pattern so far are now rejected with message LMS0298.

File attributes of elements from type C and R

Optionally elements of type C and R can be created with an attribute record (record type 164) as well by using "SOURCE-ATTRIBUTES=*KEEP(KEEP-TYPES=*ALL)". Please note that LMS versions less than V3.4C can't extract those elements correctly. Message LMS0169 may occur.

*02
*02

Outputting members to a file

*01
*01
*01
*01   Please note that if LBP is stored when adding a member, the member can't be
*01   extracted to a tape or private disk.
*01
*01   If in such a case the LBP is not needed for further processing, output the
*01   member to a pubset, reset the LBP by the command
*01   /MODIFY-FILE-ATTRIBUTES RESET-LBP=*YES, and copy the file further on to
*01   tape or private disk.

3.7 Restrictions

not applicable

3.8   Procedure in the event of errors

If an error occurs, the following error documents are needed for diagnostics:

- A detailed description of the error condition, indicating whether and how the error can be reproduced.

- runtime log

- user dump

- library to reproduce the error

- input file

- The error must be reported to the appropriate service provider.

4 Hardware requirements

*03   LMS V3.5B runs on all business servers supported by BS2000 as of BS2000/OSD V8.0.