



# **Program Directory for Basic Tape Library Support**

1.8.0

Program Number 5655-056  
FMID HDZ11ZS

for Use with  
z/OS or z/OS.e DFSMS V1 R5  
(and future releases)

Document Date: March, 2004

GI10-4505-05

**Note!**

Before using this information and the product it supports, be sure to read the general information under 7.0, "Notices" on page 15.

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## 1.0 Introduction

This Program Directory is intended for the system programmer responsible for program installation and maintenance. It contains information concerning the material and procedures associated with the installation of Basic Tape Library Support. This publication refers to Basic Tape Library Support as BTLS.

The Program Directory contains the following sections:

- 2.0, "Program Materials" on page 3 identifies the basic and optional program materials and documentation for BTLS.
- 3.0, "Program Support" on page 6 describes the IBM support available for BTLS.
- 4.0, "Program and Service Level Information" on page 7 lists the APARs (program level) and PTFs (service level) incorporated into BTLS.
- 5.0, "Installation Requirements and Considerations" on page 8 identifies the resources and considerations required for installing and using BTLS.
- 6.0, "Installation Instructions" on page 12 provides detailed installation instructions for BTLS. It also describes the procedures for activating the functions of BTLS, or refers to appropriate publications.

Before installing BTLS, read the *CBPDO Memo To Users* and the *CBPDO Memo To Users Extension* that were supplied with this program in softcopy form as well as this Program Directory and then keep them for future reference. Section 3.2, "Preventive Service Planning" on page 6 tells you how to find any updates to the information and procedures in this Program Directory.

BTLS is supplied in a Custom-Built Product Delivery Offering (CBPDO, 5751-CS3). The Program Directory is provided in softcopy form on the CBPDO tape which is identical to the hardcopy form provided with your order. Your CBPDO contains a softcopy preventive service planning (PSP) upgrade for this product. All service and HOLDDATA for BTLS are included on the CBPDO tape.

Do not use this Program Directory if you are installing BTLS with a SystemPac or ServerPac. When using these offerings, use the jobs and documentation supplied with the offering. This documentation may point you to specific sections of the Program Directory as required.

---

### 1.1 BTLS Description

BTLS provides basic automation support for the 3494 and 3495 Tape Library in a non-SMS tape environment. BTLS provides mount and demount support, library utility functions and allocation changes to direct allocations into or away from the Tape Library.

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## 1.2 BTLS FMIDs

BTLS consists of the following FMID:

HDZ11ZS

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## 2.0 Program Materials

An IBM program is identified by a program number. The program number for BTLS is 5655-056.

Basic Machine-Readable Materials are materials that are supplied under the base license and feature code, and are required for the use of the product. Optional Machine-Readable Materials are orderable under separate feature codes, and are not required for the product to function.

The program announcement material describes the features supported by BTLS. Ask your IBM representative for this information if you have not already received a copy.

---

### 2.1 Basic Machine-Readable Material

The distribution medium for this program is 3480 cartridge or 4mm cartridge. The cartridge contains all the programs and data need for installation. It is installed using SMP/E, and is in SMP/E RELFILE format. See 6.0, "Installation Instructions" on page 12 for more information about how to install the program.

Figure 1 describes the tape or cartridge.

**NOTE!**

If BTLS was shipped to you in a CBPDO, you will need to reference the CBPDO Memo To Users Extension for the physical tape layout of the Basic Machine-Readable Materials.

*Figure 1. Basic Material: Program Tape*

Medium	Feature Number	Physical Volume	External Label	VOLSER
3480	6000	1	BTLS 1.8	DZ11ZS
4mm	6001	1	BTLS 1.8	DZ11ZS

Figure 2 describes the program file content of the program tape or cartridge for BTLS.

**Notes:**

1. The data set attributes in this table should be used in the JCL of jobs reading the data sets, but since the data sets are in IEBCOPY unloaded format, their actual attributes may be different.
2. If any RELFILES are identified as PDSEs, ensure that SMPTLIB data sets are allocated as PDSEs.

Figure 2. Program File Content

Name	O R G	R E C F M	L R E C L	BLK SIZE
SMPMCS	PS	FB	80	6400
IBM.HDZ11ZS.F1	PO	FB	80	8800
IBM.HDZ11ZS.F2	PO	U	0	6144

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## 2.2 Optional Machine-Readable Material

No optional machine-readable materials are provided for BTLS.

---

## 2.3 Program Publications

The following sections identify the basic and optional publications for BTLS.

### 2.3.1 Basic Program Publications

Figure 3 identifies the basic program publications for BTLS. z/OS softcopy books will be available on the z/OS Internet library: <http://www.ibm.com/servers/eserver/zseries/zos/bkserv/>

Figure 3. Basic Material: Publications

Publication Title	Form Number
Basic Tape Library Support User's Guide and Reference	SC26-7016
Basic Tape Library Support Licensed Program Specification	GC26-7017

### 2.3.2 Optional Program Publications

No optional publications are provided for BTLS.

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## 2.4 Program Source Materials

No program source materials or viewable program listings are provided for BTLS.



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## 2.5 Publications Useful During Installation

The publications listed in Figure 4 on page 5 may be useful during the installation of BTLS. To order copies, contact your IBM representative or visit the IBM Publications Center on the world wide web at: <http://www.ibm.com/shop/publications/order>

<i>Figure 4. Publications Useful During Installation</i>	
<b>Publication Title</b>	<b>Form Number</b>
<i>IBM SMP/E for z/OS and OS/390 User's Guide</i>	SA22-7773
<i>IBM SMP/E for z/OS and OS/390 Commands</i>	SA22-7771
<i>IBM SMP/E for z/OS and OS/390 Reference</i>	SA22-7772
<i>IBM SMP/E for z/OS and OS/390 Messages, Codes, and Diagnosis</i>	GA22-7770
<i>IBM Online Productivity Edition Messages and Codes Collection</i>	SK2T-2068
<i>IBM TotalStorage Enterprise Automated Tape Library 3494 Introduction and Planning Guide</i>	GA32-0448
<i>IBM TotalStorage Enterprise Automated Tape Library 3494 Operator Guide</i>	GA32-0449
<i>Magstar 3495 Tape Library Introduction and Planning Guide</i>	GA32-0234
<i>Magstar 3495 Tape Library Operator Guide</i>	GA32-0235
<i>IBM eServer zSeries Online Library: z/OS Software Products Collection</i>	SK3T-4270
<i>IBM eServer zSeries Online Library: z/OS V1Rx and Software Products DVD Collection</i>	SK3T-4271

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## 3.0 Program Support

This section describes the IBM support available for BTLS.

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### 3.1 Program Services

Contact your IBM representative for specific information about available program services.

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### 3.2 Preventive Service Planning

Before installing BTLS, you should review the current Preventive Service Planning (PSP) information. If you obtained BTLS as part of a CBPDO, there is HOLDDATA and PSP information included on the CBPDO.

If the CBPDO for BTLS is more than two weeks old when you install it, you should contact the IBM Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

For program support, access the Software Support website at <http://www-3.ibm.com/software/support/>

PSP Buckets are identified by UPGRADEs, which specify product levels, and SUBSETs, which specify the FMIDs for a product level. The UPGRADE and SUBSET values for BTLS are:

<i>Figure 5. PSP Upgrade and Subset ID</i>		
UPGRADE	SUBSET	Description
BTLS	HDZ11ZS	1ZS

---

### 3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will provide the address to which any needed documentation can be sent.

Figure 6 identifies the component IDs (COMPID) for BTLS.

<i>Figure 6. Component IDs</i>			
FMID	COMPID	Component Name	RETAIN Release
HDZ11ZS	5695DF113	Device Support Services	1ZS

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## 4.0 Program and Service Level Information

This section identifies the program and any relevant service levels of BTLS. The program level refers to the APAR fixes incorporated into the program. The service level refers to the PTFs integrated.

---

### 4.1 Program Level Information

The following APAR fixes against previous releases of BTLS have been incorporated into this release. They are listed by FMID.

- FMID HDZ11ZS

OA04352  
OW52532

OW53584  
OW54548

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### 4.2 Service Level Information

No PTFs against this release of BTLS have been incorporated into the product tape.

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## 5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating BTLS. The following terminology is used:

- *Driving system*: the system used to install the program.
- *Target system*: the system on which the program is installed.

In many cases, the same system can be used as both a driving system and a target system. However, you may want to set up a clone of your system to use as a target system by making a separate IPL-able copy of the running system. The clone should include copies of all system libraries that SMP/E updates, copies of the SMP/E CSI data sets that describe the system libraries, and your PARMLIB and PROCLIB.

Some cases where two systems should be used include the following:

- When installing a new level of a product that is already installed, the new product will delete the old one. By installing onto a separate target system, you can test the new product while still keeping the old one in production.
- When installing a product that shares libraries or load modules with other products, the installation can disrupt the other products. Installing onto a test system or clone will allow you to assess these impacts without disrupting your production system.

---

### 5.1 Driving System Requirements

This section describes the environment of the driving system required to install BTLS.

#### 5.1.1 Machine Requirements

The driving system can run in any hardware environment that supports the required software.

#### 5.1.2 Programming Requirements

*Figure 7. Driving System Software Requirements*

<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>
Any <b>one</b> of the following:	
5647-A01	OS/390 V2.10.0
5694-A01	z/OS V1.01.0 or higher
5655-G44	IBM SMP/E for z/OS and OS/390 V3.02.0 or higher

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## 5.2 Target System Requirements

This section describes the environment of the target system required to install and use BTLS.

### 5.2.1 Machine Requirements

The target system can run in any hardware environment that supports the required software.

### 5.2.2 Programming Requirements

#### 5.2.2.1 Installation Requisites

An installation requisite is defined as a product that must be present or that should be present on the system for successful installation of this product.

A mandatory installation requisite identifies which product is required, without exception, or this product **will not install** on your system. This includes products specified as PREs or REQs.

<i>Figure 8. Mandatory Installation Requisites</i>	
<b>Program Number</b>	<b>Product Name and Minimum VRM/Service Level</b>
5647-A01	z/OS Version 1 Release 5 or higher
5655-G52	z/OS.e Version 1 Release 5 or higher

### 5.2.3 DASD Storage Requirements

BTLS libraries can reside on 3390, compatible, or equivalent device geometry.

Figure 9 lists the total space required for each type of library.

<i>Figure 9. Total DASD Space Required by BTLS</i>	
<b>Library Type</b>	<b>Total Space Required</b>
Target	12 tracks for 3390 DASD
Distribution	12 tracks for 3390 DASD

#### Notes:

1. IBM recommends use of system determined block sizes for efficient DASD utilization for all non-RECFM U data sets. For RECFM U data sets, IBM recommends a block size of 32760, which is the most efficient from a performance and DASD utilization perspective.

2. Abbreviations used for the data set type are:

- U** Unique data set, allocated by this product and used only by this product. To determine the correct storage needed for this data set, this table provides all required information; no other tables (or Program Directories) need to be referenced for the data set size.
- S** Shared data set, allocated by this product and used by this product and others. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other Program Directories). If the data set already exists, it must have enough free space to accommodate the storage size given in this table.
- E** Existing shared data set, used by this product and others. This data set is NOT allocated by this product. To determine the correct storage needed for this data set, the storage size given in this table needs to be added to other tables (perhaps in other program directories). This existing data set must have enough free space to accommodate the storage size given in this table.

If you currently have a previous release of this product installed in these libraries, the installation of this release will delete the old one and reclaim the space used by the old release and any service that had been installed. You can determine whether or not these libraries have enough space by deleting the old release with a dummy function, compressing the libraries, and comparing the space requirements with the free space in the libraries.

The following figures describe the target and distribution libraries required to install BTLS. The storage requirements of BTLS must be added to the storage required by other programs having data in the same library or path.

**Note:** The data in these tables should be used when determining which libraries can be merged into common data sets. In addition, since some ALIAS names may not be unique, ensure that no naming conflicts will be introduced before merging libraries.

Figure 10. Storage Requirements for BTLS Target Libraries

Library DDNAME	Member Type	Target Volume	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
NUCLEUS	LMOD	ANY	E	PO	U	0	2	2
CMDLIB	LMOD	ANY	E	PO	U	0	3	1
LINKLIB	LMOD	ANY	E	PO	U	0	4	2
LPALIB	LMOD	ANY	E	PO	U	0	3	1

Figure 11. Storage Requirements for BTLS Distribution Libraries

Library DDNAME	T Y P E	O R G	R E C F M	L R E C L	No. of 3390 Trks	No. of DIR Blks
AOSD0	E	PO	U	0	2	1
AOSU0	E	PO	U	0	10	5

### 5.3 FMIDs Deleted

Installing BTLS may result in the deletion of other FMIDs. To see what FMIDs will be deleted, examine the ++VER statement in the product's SMPMCS.

If you do not wish to delete these FMIDs at this time, you must install BTLS into separate SMP/E target and distribution zones.

**Note:** These FMIDs will not automatically be deleted from the Global Zone. Consult the SMP/E manuals for instructions on how to do this.

### 5.4 Special Considerations

BTLS has no special considerations for the target system.

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## 6.0 Installation Instructions

This chapter describes the installation method and the step-by-step procedures to install and to activate the functions of BTLS.

Please note the following:

- If you want to install BTLS into its own SMP/E environment, consult the SMP/E manuals for instructions on creating and initializing the SMPCSI and the SMP/E control data sets.
- The SMP/E dialogs may be used instead of the sample jobs to accomplish the SMP/E installation steps.

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### 6.1 Installing BTLS

#### 6.1.1 SMP/E Considerations for Installing BTLS

This release of BTLS is installed using the SMP/E RECEIVE, APPLY, and ACCEPT commands. The SMP/E dialogs may be used to accomplish the SMP/E installation steps.

#### 6.1.2 SMP/E Options Subentry Values

The recommended values for some SMP/E CSI subentries are shown in Figure 12. Use of values lower than these may result in failures in the installation process. DSSPACE is a subentry in the GLOBAL options entry. PEMAX is a subentry of the GENERAL entry in the GLOBAL options entry. Refer to the SMP/E manuals for instructions on updating the global zone.

*Figure 12. SMP/E Options Subentry Values*

SUB-ENTRY	Value	Comment
DSSPACE	1690,440,2500	DSSPACE specifies the primary and secondary allocation (in tracks) and the number of directory blocks to be allocated for each SMPTLIB data set. After the SMPTLIB data set is loaded, unused space is freed. For more information SMPTLIB data sets, see the <i>IBM SMP/E for z/OS and OS/390 Commands</i> manual.
PEMAX	SMP/E Default	IBM recommends using the SMP/E default for PEMAX.



### 6.1.3 Perform SMP/E RECEIVE

Perform an SMP/E RECEIVE for BTLS.

Having obtained BTLS as part of a CBPDO, use the RCVPDO job found in the CBPDO RIMLIB data set to RECEIVE the BTLS FMIDs as well as any service, HOLDDATA, or preventive service planning (PSP) information included on the CBPDO tape. For more information, refer to the documentation included with the CBPDO.

### 6.1.4 Allocate SMP/E Target and Distribution Libraries

All data sets used by BTLS are allocated by other products, so no new allocations are required.

### 6.1.5 Create DDDEF Entries

All DDDEFs used by BTLS are created by other products, so no new DDDEFs are required.

### 6.1.6 Perform SMP/E APPLY

Perform an SMP/E APPLY CHECK for BTLS.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the APPLY CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Once you have taken any actions indicated by the APPLY CHECK, remove the CHECK operand and run the job again to perform the APPLY.

**Note:** The GROUPEXTEND operand indicates that SMP/E apply all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

#### **Expected Return Codes and Messages from APPLY CHECK:**

Successful APPLY CHECK processing returns a condition code of 0.

#### **Expected Return Codes and Messages from APPLY:**

Successful APPLY processing returns a condition code of 0.

## 6.1.7 Perform SMP/E ACCEPT

Perform an SMP/E ACCEPT CHECK for BTLS.

To receive the full benefit of the SMP/E Causer SYSMOD Summary Report, do *not* bypass the following on the ACCEPT CHECK: PRE, ID, REQ, and IFREQ. This is because the SMP/E root cause analysis identifies the cause only of **ERRORS** and not of **WARNINGS** (SYSMODs that are bypassed are treated as warnings, not errors, by SMP/E).

Before using SMP/E to load new distribution libraries, it is recommended that you set the ACCJCLIN indicator in the distribution zone. This will cause entries produced from JCLIN to be saved in the distribution zone whenever a SYSMOD containing inline JCLIN is ACCEPTed. For more information on the ACCJCLIN indicator, see the description of inline JCLIN in the SMP/E manuals.

Once you have taken any actions indicated by the ACCEPT CHECK, remove the CHECK operand and run the job again to perform the ACCEPT.

**Note:** The GROUPEXTEND operand indicates that SMP/E accept all requisite SYSMODs. The requisite SYSMODS might be applicable to other functions.

### **Expected Return Codes and Messages from ACCEPT CHECK:**

Successful ACCEPT CHECK processing returns a condition code of 0.

### **Expected Return Codes and Messages from ACCEPT:**

Successful ACCEPT processing returns a condition code of 0.

If PTFs containing replacement modules are being ACCEPTed, SMP/E ACCEPT processing will linkedit/bind the modules into the distribution libraries. During this processing, the Linkage Editor or Binder may issue messages documenting unresolved external references, resulting in a return code of 4 from the ACCEPT step. These messages can be ignored, because the distribution libraries are not executable and the unresolved external references will not affect the executable system libraries.

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## 6.2 Activating BTLS

The publication *BTLS Users Guide and Reference, SC26-7016* contains the step-by-step procedures to activate the functions of BTLS.

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## 7.0 Notices

References in this document to IBM products, programs, or services do not imply that IBM intends to make these available in all countries in which IBM operates. Any reference to an IBM product, program, or service is not intended to state or imply that only IBM's product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe on any of IBM's intellectual property rights may be used instead of the IBM product, program, or service. Evaluation and verification of operation in conjunction with other products, except those expressly designated by IBM, is the user's responsibility.

APAR numbers are provided in this document to assist in locating PTFs that may be required. Ongoing problem reporting may result in additional APARs being created. Therefore, the APAR lists in this document may not be complete. To obtain current service recommendations and to identify current product service requirements, always contact the IBM Customer Support Center or use S/390 SoftwareXcel to obtain the current "PSP Bucket".

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For each of the topics below please indicate your satisfaction level by circling your choice from the rating scale. If a statement does not apply, please circle N.

RATING SCALE						
very satisfied	<----->				very dissatisfied	not applicable
1	2	3	4	5	N	

	Satisfaction					
Ease of product installation	1	2	3	4	5	N
Contents of Program Directory	1	2	3	4	5	N
Installation Verification Programs	1	2	3	4	5	N
Time to install the product	1	2	3	4	5	N
Readability and organization of Program Directory tasks	1	2	3	4	5	N
Necessity of all installation tasks	1	2	3	4	5	N
Accuracy of the definition of the installation tasks	1	2	3	4	5	N
Technical level of the installation tasks	1	2	3	4	5	N
Ease of getting the system into production after installation	1	2	3	4	5	N

How did you order this product?

- CBPDO
- CustomPac
- ServerPac
- Independent
- Other

Is this the first time your organization has installed this product?

- Yes
- No

Were the people who did the installation experienced with the installation of z/OS products?

- Yes



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