

**Linux Standard Base Core Module
Specification for AMD64 2.0.1**

Linux Standard Base Core Module Specification for AMD64 2.0.1

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Specification Introduction

Specification Introduction

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Foreword

- 1 | This is version 2.0.1 of the Linux Standard Base Core Module Specification for AMD64. An implementation of this
- 2 | version of the specification may not claim to be an implementation of the Linux Standard Base unless it has
- 3 | successfully completed the compliance process as defined by the Free Standards Group.

Introduction

1 The LSB defines a binary interface for application programs that are compiled and packaged for LSB-conforming
2 implementations on many different hardware architectures. Since a binary specification shall include information
3 specific to the computer processor architecture for which it is intended, it is not possible for a single document to
4 specify the interface for all possible LSB-conforming implementations. Therefore, the LSB is a family of
5 specifications, rather than a single one.

6 This document should be used in conjunction with the documents it references. This document enumerates the system
7 components it includes, but descriptions of those components may be included entirely or partly in this document,
8 partly in other documents, or entirely in other reference documents. For example, the section that describes system
9 service routines includes a list of the system routines supported in this interface, formal declarations of the data
10 structures they use that are visible to applications, and a pointer to the underlying referenced specification for
11 information about the syntax and semantics of each call. Only those routines not described in standards referenced by
12 this document, or extensions to those standards, are described in the detail. Information referenced in this way is as
13 much a part of this document as is the information explicitly included here.

I. Introductory Elements

Chapter 1. Scope

1.1. General

1 The Linux Standard Base (LSB) defines a system interface for compiled applications and a minimal environment for
2 support of installation scripts. Its purpose is to enable a uniform industry standard environment for high-volume
3 applications conforming to the LSB.

4 These specifications are composed of two basic parts: A common specification ("LSB-generic") describing those parts
5 of the interface that remain constant across all implementations of the LSB, and an architecture-specific specification
6 ("LSB-arch") describing the parts of the interface that vary by processor architecture. Together, the LSB-generic and
7 the architecture-specific supplement for a single hardware architecture provide a complete interface specification for
8 compiled application programs on systems that share a common hardware architecture.

9 The LSB-generic document shall be used in conjunction with an architecture-specific supplement. Whenever a section
10 of the LSB-generic specification shall be supplemented by architecture-specific information, the LSB-generic
11 document includes a reference to the architecture supplement. Architecture supplements may also contain additional
12 information that is not referenced in the LSB-generic document.

13 The LSB contains both a set of Application Program Interfaces (APIs) and Application Binary Interfaces (ABIs). APIs
14 may appear in the source code of portable applications, while the compiled binary of that application may use the
15 larger set of ABIs. A conforming implementation shall provide all of the ABIs listed here. The compilation system
16 may replace (e.g. by macro definition) certain APIs with calls to one or more of the underlying binary interfaces, and
17 may insert calls to binary interfaces as needed.

18 The LSB is primarily a binary interface definition. Not all of the source level APIs available to applications may be
19 contained in this specification.

1.2. Module Specific Scope

20 This is the AMD64 architecture specific Core module of the Linux Standards Base (LSB). This module supplements
21 the generic LSB Core module with those interfaces that differ between architectures.

22 Interfaces described in this module are mandatory except where explicitly listed otherwise. Core interfaces may be
23 supplemented by other modules; all modules are built upon the core.

Chapter 2. Normative References

1 The specifications listed below are referenced in whole or in part by the Linux Standard Base. In this specification,
 2 where only a particular section of one of these references is identified, then the normative reference is to that section
 3 alone, and the rest of the referenced document is informative.

4 **Table 2-1. Normative References**

System V Application Binary Interface—DRAFT—17 December 2003	http://www.caldera.com/developers/gabi/2003-12-17/contents.html
DWARF Debugging Information Format, Revision 2.0.0 (July 27, 1993)	http://www.eagereon.com/dwarf/dwarf-2.0.0.pdf
Filesystem Hierarchy Standard (FHS) 2.3	http://www.pathname.com/fhs/
IEEE Standard 754 for Binary Floating-Point Arithmetic	http://www.ieee.org/
System V Application Binary Interface, Edition 4.1	http://www.caldera.com/developers/devspeecs/gabi41.pdf
ISO/IEC 9899: 1999, Programming Languages—C	
Linux Assigned Names And Numbers Authority	http://www.lanana.org/
Large File Support	http://www.UNIX-systems.org/version2/whatsnew/lfs20mar.html
LI18NUNIX 2000 Globalization Specification, Version 1.0 with Amendment 4	http://www.li18nux.org/docs/html/LI18NUNIX-2000-amd4.htm
Linux Standard Base	http://www.linuxbase.org/spec/
OSF RFC 86.0	http://www.opengroup.org/tech/rfc/mirror-rfc/rfc86.0.txt
RFC 1833: Binding Protocols for ONC RPC Version 2	http://www.ietf.org/rfc/rfc1833.txt
RFC 1952: GZIP file format specification version 4.3	http://www.ietf.org/rfc/rfc1952.txt
RFC 2440: OpenPGP Message Format	http://www.ietf.org/rfc/rfc2440.txt
CAE Specification, May 1996, X/Open Curses, Issue 4, Version 2 (ISBN: 1-85912-171-3, C610), plus Corrigendum U018	http://www.opengroup.org/publications/catalog/un.htm
The Single UNIX® Specification(SUS) Version 2, Commands and Utilities (XCU), Issue 5 (ISBN: 1-85912-191-8, C604)	http://www.opengroup.org/publications/catalog/un.htm
CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1-85912-181-0,	http://www.opengroup.org/publications/catalog/un.htm

C606)		
ISO/IEC 9945:2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3		http://www.unix.org/version3/
System V Interface Definition, Issue 3 (ISBN 0201566524)		
System V Interface Definition, Fourth Edition		
AMD64 Architecture Programmer's Manual, Volume 1: Application Programming 24592 3.08		http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 2: System Programming 24593 3.08		http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 3: General Purpose and System Instructions 24594 3.03		http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 4: 128-bit Media Instructions 26568 3.04		http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 5: 64-bit Media and x87 Floating Point Instructions 26569 3.03		http://www.amd.com/us-en/Processors/DevelopWithAMD/
System V Application Binary Interface AMD64 Architecture Processor Supplement, Draft Version 0.90		http://www.amd64.org/abi.pdf
zlib 1.2 Manual		http://www.gzip.org/zlib/
Name	Title	URL
AMD64 Architecture Programmer's Manual, Volume 1	AMD64 Architecture Programmer's Manual, Volume 1: Application Programming 24592 3.08	http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 2	AMD64 Architecture Programmer's Manual, Volume 2: System Programming 24593 3.08	http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 3	AMD64 Architecture Programmer's Manual, Volume 3: General Purpose and System Instructions 24594 3.03	http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 4	AMD64 Architecture Programmer's Manual, Volume 4: 128-bit Media Instructions 26568 3.04	http://www.amd.com/us-en/Processors/DevelopWithAMD/
AMD64 Architecture Programmer's Manual, Volume 5	AMD64 Architecture Programmer's Manual, Volume 5: 64-bit Media and x87 Floating-Point Instructions 26569 3.03	http://www.amd.com/us-en/Processors/DevelopWithAMD/

DWARF Debugging Information Format	DWARF Debugging Information Format, Revision 2.0.0 (July 27, 1993)	http://www.eagercon.com/dwarf/dwarf-2.0.0.pdf
Filesystem Hierarchy Standard	Filesystem Hierarchy Standard (FHS) 2.3	http://www.pathname.com/fhs/
IEEE Std 754-1985	IEEE Standard 754 for Binary Floating-Point Arithmetic	http://www.ieee.org/
ISO C (1999)	ISO/IEC 9899: 1999, Programming Languages --C	
ISO POSIX (2003)	ISO/IEC 9945-1:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 1: Base Definitions ISO/IEC 9945-2:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 2: System Interfaces ISO/IEC 9945-3:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 3: Shell and Utilities ISO/IEC 9945-4:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 4: Rationale	http://www.unix.org/version3/
Large File Support	Large File Support	http://www.UNIX-systems.org/version2/whatsnew/lfs20mar.html
Li18nux Globalization Specification	LI18NUNIX 2000 Globalization Specification, Version 1.0 with Amendment 4	http://www.li18nux.org/docs/html/LI18NUNIX-2000-amd4.htm
Linux Allocated Device Registry	LINUX ALLOCATED DEVICES	http://www.lanana.org/docs/device-list/devices.txt
PAM	Open Software Foundation, Request For Comments: 86.0 , October 1995, V. Samar & R.Schemers (SunSoft)	http://www.opengroup.org/tech/rfc/mirror-rfc/rfc86.0.txt
RFC 1321: The MD5 Message-Digest Algorithm	IETF RFC 1321: The MD5 Message-Digest Algorithm	http://www.ietf.org/rfc/rfc1321.txt
RFC 1833: Binding Protocols for ONC RPC Version 2	IETF RFC 1833: Binding Protocols for ONC RPC Version 2	http://www.ietf.org/rfc/rfc1833.txt

RFC 1951: DEFLATE Compressed Data Format Specification	IETF RFC 1951: DEFLATE Compressed Data Format Specification version 1.3	http://www.ietf.org/rfc/rfc1951.txt
RFC 1952: GZIP File Format Specification	IETF RFC 1952: GZIP file format specification version 4.3	http://www.ietf.org/rfc/rfc1952.txt
RFC 2440: OpenPGP Message Format	IETF RFC 2440: OpenPGP Message Format	http://www.ietf.org/rfc/rfc2440.txt
SUSv2	CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1-85912-181-0, C606)	http://www.opengroup.org/publications/catalog/un.htm
SUSv2 Command and Utilities	The Single UNIX® Specification(SUS) Version 2, Commands and Utilities (XCU), Issue 5 (ISBN: 1-85912-191-8, C604)	http://www.opengroup.org/publications/catalog/un.htm
SVID Issue 3	American Telephone and Telegraph Company, System V Interface Definition, Issue 3 ; Morristown, NJ, UNIX Press, 1989.(ISBN 0201566524)	
SVID Issue 4	System V Interface Definition, Fourth Edition	
System V ABI	System V Application Binary Interface, Edition 4.1	http://www.caldera.com/developers/devspecs/gabi41.pdf
System V ABI Update	System V Application Binary Interface - DRAFT - 17 December 2003	http://www.caldera.com/developers/gabi/2003-12-17/contents.html
System V Application Binary Interface AMD64 Architecture Processor Supplement	System V Application Binary Interface AMD64 Architecture Processor Supplement, Draft Version 0.90	http://www.amd64.org/abi.pdf
this specification	Linux Standard Base	http://www.linuxbase.org/spec/
X/Open Curses	CAE Specification, May 1996, X/Open Curses, Issue 4, Version 2 (ISBN: 1-85912-171-3, C610), plus Corrigendum U018	http://www.opengroup.org/publications/catalog/un.htm
zlib Manual	zlib 1.2 Manual	http://www.gzip.org/zlib/

Chapter 3. Requirements

3.1. Relevant Libraries

1 The libraries listed in Table 3-1 shall be available on x86-64 Linux Standard Base systems, with the specified runtime
2 names. These names override or supplement the names specified in the generic LSB specification. The specified
3 program interpreter, referred to as proginterp in this table, shall be used to load the shared libraries specified by
4 DT_NEEDED entries at run time.

5 **Table 3-1. Standard Library Names**

Library	Runtime Name
libmproginterp	libm/lib64/ld-lsb-x86-64.so.62
libdl	libdl.so.2
libcrypt	libcrypt.so.1
libm	libm.so.6
libpthread	libpthread.so.0
libgcc_s	libgcc_s.so.1
libz	libz.so.1
libncurses	libncurses.so.5
libutil	libutil.so.1
libe	libe.so.6
libpthread	libpthread.so.0
proginterp	lib64/ld-lsb-x86-64.so.2
libgcc_s	libgcc_s.so.1

6
7 These libraries will be in an implementation-defined directory which the dynamic linker shall search by default.

3.2. LSB Implementation Conformance

8 A conforming implementation shall satisfy the following requirements:

- 9 • The implementation shall implement fully the architecture described in the hardware manual for the target
10 processor architecture.
- 11 • The implementation shall be capable of executing compiled applications having the format and using the system
12 interfaces described in this document.

- 13 • The implementation shall provide libraries containing the interfaces specified by this document, and shall provide a
14 dynamic linking mechanism that allows these interfaces to be attached to applications at runtime. All the interfaces
15 shall behave as specified in this document.
- 16 • The map of virtual memory provided by the implementation shall conform to the requirements of this document.
- 17 • The implementation's low-level behavior with respect to function call linkage, system traps, signals, and other such
18 activities shall conform to the formats described in this document.
- 19 • The implementation shall provide all of the mandatory interfaces in their entirety.
- 20 • The implementation may provide one or more of the optional interfaces. Each optional interface that is provided
21 shall be provided in its entirety. The product documentation shall state which optional interfaces are provided.
- 22 • The implementation shall provide all files and utilities specified as part of this document in the format defined here
23 and in other referenced documents. All commands and utilities shall behave as required by this document. The
24 implementation shall also provide all mandatory components of an application's runtime environment that are
25 included or referenced in this document.
- 26 • The implementation, when provided with standard data formats and values at a named interface, shall provide the
27 behavior defined for those values and data formats at that interface. However, a conforming implementation may
28 consist of components which are separately packaged and/or sold. For example, a vendor of a conforming
29 implementation might sell the hardware, operating system, and windowing system as separately packaged items.
- 30 • The implementation may provide additional interfaces with different names. It may also provide additional
31 behavior corresponding to data values outside the standard ranges, for standard named interfaces.

3.3. LSB Application Conformance

32 | ~~Ann~~A conforming application shall satisfy the following requirements:

- 33 • Its executable files are either shell scripts or object files in the format defined for the Object File Format system
34 interface.
- 35 • Its object files participate in dynamic linking as defined in the Program Loading and Linking System interface.
- 36 • It employs only the instructions, traps, and other low-level facilities defined in the Low-Level System interface as
37 being for use by applications.
- 38 • If it requires any optional interface defined in this document in order to be installed or to execute successfully, the
39 requirement for that optional interface is stated in the application's documentation.
- 40 • It does not use any interface or data format that is not required to be provided by a conforming implementation,
41 unless:
 - 42 • If such an interface or data format is supplied by another application through direct invocation of that application
43 during execution, that application is in turn an LSB conforming application.
 - 44 • The use of that interface or data format, as well as its source, is identified in the documentation of the application.
- 45 • It shall not use any values for a named interface that are reserved for vendor extensions.

46 A strictly conforming application does not require or use any interface, facility, or implementation-defined extension
47 that is not defined in this document in order to be installed or to execute successfully.

Chapter 4. Definitions

1 For the purposes of this document, the following definitions, as specified in the *ISO/IEC Directives, Part 2, 2001, 4th*
2 *Edition*, apply:

3 can

4 be able to; there is a possibility of; it is possible to

5 cannot

6 be unable to; there is no possibility of; it is not possible to

7 may

8 is permitted; is allowed; is permissible

9 need not

10 it is not required that; no...is required

11 shall

12 is to; is required to; it is required that; has to; only...is permitted; it is necessary

13 shall not

14 is not allowed [permitted] [acceptable] [permissible]; is required to be not; is required that...be not; is not to be

15 should

16 it is recommended that; ought to

17 should not

18 it is not recommended that; ought not to

Chapter 5. Terminology

1 For the purposes of this document, the following terms apply:

2 archLSB

3 The architectural part of the LSB Specification which describes the specific parts of the interface that are
4 platform specific. The archLSB is complementary to the gLSB.

5 Binary Standard

6 The total set of interfaces that are available to be used in the compiled binary code of a conforming application.

7 gLSB

8 The common part of the LSB Specification that describes those parts of the interface that remain constant across
9 all hardware implementations of the LSB.

10 implementation-defined

11 Describes a value or behavior that is not defined by this document but is selected by an implementor. The value or
12 behavior may vary among implementations that conform to this document. An application should not rely on the
13 existence of the value or behavior. An application that relies on such a value or behavior cannot be assured to be
14 portable across conforming implementations. The implementor shall document such a value or behavior so that it
15 can be used correctly by an application.

16 Shell Script

17 A file that is read by an interpreter (e.g., awk). The first line of the shell script includes a reference to its
18 interpreter binary.

19 Source Standard

20 The set of interfaces that are available to be used in the source code of a conforming application.

21 undefined

22 Describes the nature of a value or behavior not defined by this document which results from use of an invalid
23 program construct or invalid data input. The value or behavior may vary among implementations that conform to
24 this document. An application should not rely on the existence or validity of the value or behavior. An application
25 that relies on any particular value or behavior cannot be assured to be portable across conforming
26 implementations.

27 unspecified

28 Describes the nature of a value or behavior not specified by this document which results from use of a valid
29 program construct or valid data input. The value or behavior may vary among implementations that conform to
30 this document. An application should not rely on the existence or validity of the value or behavior. An application
31 that relies on any particular value or behavior cannot be assured to be portable across conforming
32 implementations.

33 Other terms and definitions used in this document shall have the same meaning as defined in Chapter 3 of the Base
34 Definitions volume of ISO POSIX (2003).

Chapter 6. Documentation Conventions

Throughout this document, the following typographic conventions are used:

`function()`

the name of a function

command

the name of a command or utility

CONSTANT

a constant value

parameter

a parameter

variable

a variable

Throughout this specification, several tables of interfaces are presented. Each entry in these tables has the following format:

name

the name of the interface

(symver)

An optional symbol version identifier, if required.

[refno]

A reference number indexing the table of referenced specifications that follows this table.

For example,

forkpty(GLIBC_2.0) [1]

refers to the interface named `forkpty` with symbol version `GLIBC_2.0` that is defined in the first of the listed references below the table.

ELF Specification

2

3 **ELF Specification**

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I. Low Level System Information

Chapter 1. Machine Interface

1.1. Processor Architecture

1 The AMD64 Architecture is specified by the following documents

- 2 • AMD64 Architecture Programmer's Manual, Volume 1: ~~Application Programming 24592 3.08~~
- 3 • AMD64 Architecture Programmer's Manual, Volume 2: ~~System Programming 24593 3.08~~
- 4 • AMD64 Architecture Programmer's Manual, Volume 3: ~~General Purpose and System Instructions 24594 3.03~~
- 5 • AMD64 Architecture Programmer's Manual, Volume 4: ~~128-bit Media Instructions 26568 3.04~~
- 6 • AMD64 Architecture Programmer's Manual, Volume 5: ~~64-bit Media and x87 Floating-Point Instructions 26569~~
- 7 ~~3.03~~
- 8 • System V Application Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90~~

9 Applications conforming to this specification must provide feedback to the user if a feature that is required for correct
10 execution of the application is not present. Applications conforming to this specification should attempt to execute in
11 a diminished capacity if a required instruction set feature is not present.

12 Only instructions which do not require elevated privileges may be used.

13 Applications may not make system calls directly. The interfaces in the C library must be used instead.

14 This specification does not provide any performance guarantees of a conforming system. A system conforming to this
15 specification may be implemented in either hardware or software.

1.2. Data Representation

16 LSB-conforming applications shall use the data representation as defined in Chapter 3 of System V Application
17 Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90~~.

1.2.1. Byte Ordering

1.2.2. Fundamental Types

1.2.3. Aggregates and Unions

1.2.4. Bit Fields

Chapter 2. Function Calling Sequence

- 1 | LSB-conforming applications shall use the function calling sequence as defined in Chapter 3 of System V Application
2 | Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90~~.

2.1. CPU Registers

2.2. Floating Point Registers

2.3. Stack Frame

2.4. Arguments

2.4.1. Integral/Pointer

2.4.2. Floating Point

2.4.3. Struct and Union Point

2.4.4. Variable Arguments

2.5. Return Values

2.5.1. Void

2.5.2. Integral/Pointer

2.5.3. Floating Point

2.5.4. Struct and Union Point

Chapter 3. Operating System Interface

- 1 | LSB-conforming applications shall use the Operating System Interfaces as defined in Chapter 3 of System V
2 | Application Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90~~.

3.1. Virtual Address Space

3.1.1. Page Size

3.1.2. Virtual Address Assignments

3.1.3. Managing the PProcess Stack

3.1.4. Coding Guidelines

3.2. Processor Execution Mode

3.3. Exception Interface

3.3.1. Hardware Exception Types

3.3.2. Software Trap Types

3.4. Signal Delivery

3.4.1. Signal Handler Interface

Chapter 4. Process Initialization

- 1 | LSB-conforming applications shall use the Process Initialization as defined in Chapter 3 of the System V Application
- 2 | Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90.~~

4.1. Special Registers

4.2. Process Stack (on entry)

4.3. Auxilliary Vectors

4.4. Environment

Chapter 5. Coding Examples

1 | LSB-conforming applications may implement fundamental operations using the Coding Examples as defined in
2 | Chapter 3 of the System V Application Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version~~
3 | 0.90.

5.1. Code Model Overview/Architecture Constraints

5.2. Position-Independent Function Prologue

5.3. Data Objects

5.3.1. Absolute Load & Store

5.3.2. Position Relative Load & Store

5.4. Function Calls

5.4.1. Absolute Direct Function Call

5.4.2. Absolute Indirect Function Call

5.4.3. Position-Independent Direct Function Call

5.4.4. Position-Independent Indirect Function Call

5.5. Branching

5.5.1. Branch Instruction

5.5.2. Absolute switch() code

5.5.3. Position-Independent switch() code

Chapter 6. C Stack Frame

6.1. Variable Argument List

6.2. Dynamic Allocation of Stack Space

Chapter 7. Debug Information

- 1 The LSB does not currently specify the format of Debug information.

II. Object Format

2 LSB-conforming implementations shall support an object file , called Executable and Linking Format (ELF) as
3 defined by the System V ~~Application Binary Interface, Edition 4.~~ABI , System V ~~Application Binary Interface—~~
4 ~~DRAFT—17 December 2003~~ABI Update , System V Application Binary Interface AMD64 Architecture Processor
5 Supplement, ~~Draft Version 0.90~~ and as supplemented by the ~~Linux Standard Base~~this specification and this document.

Chapter 8. ELF Header

8.1. Machine Information

- 1 | LSB-conforming applications shall use the Machine Information as defined in Chapter 4 of the System V Application
- 2 | Binary Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90~~.

8.1.1. File Class

8.1.2. Data Encoding

8.1.3. OS Identification

8.1.4. Processor Identification

8.1.5. Processor Specific Flags

Chapter 9. Sections

9.1. Special Sections

1 The following sections are defined in the System V Application Binary Interface AMD64 Architecture Processor
2 Supplement, ~~Draft Version 0.90~~.

3 **Table 9-1. ELF Special Sections**

Name	Type	Attributes
.got	SHT_PROGBITS	SHF_ALLOC+SHF_WRITE
.plt	SHT_PROGBITS	SHF_ALLOC+SHF_EXECINSTR

5 .got

6 This section holds the global offset table

7 .plt

8 This section holds the procedure linkage table.

9.2. Additional Special Sections

9 The following additional sections are defined here.

10 **Table 9-2. Additional Special Sections**

Name	Type	Attributes
.rela.dyn	SHT_RELA	SHF_ALLOC
.rela.plt	SHT_RELA	SHF_ALLOC

12 .rela.dyn

13 This section holds RELA type relocation information for all sections of a shared library except the PLT

14 .rela.plt

15 This section holds RELA type relocation information for the PLT section of a shared library or dynamically
16 linked application

Chapter 10. Symbol Table

- 1 | LSB-conforming applications shall use the Symbol Table as defined in Chapter 4 of the System V Application Binary
- 2 | Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90.~~

Chapter 11. Relocation

- 1 | LSB-conforming applications shall use Relocations as defined in Chapter 4 of the System V Application Binary
- 2 | Interface AMD64 Architecture Processor Supplement, ~~Draft Version 0.90.~~

11.1. Relocation Types

III. Program Loading and Dynamic Linking

2 LSB-conforming implementations shall support the object file information and system actions that create running
3 programs as specified in the System V ~~Application Binary Interface, Edition 4.1~~ABI , System V ~~Application Binary~~
4 ~~Interface DRAFT 17 December 2003~~ABI Update , System V Application Binary Interface AMD64 Architecture
5 Processor Supplement, ~~Draft Version 0.90~~ and as supplemented by the ~~Linux Standard Base~~this specification and this
6 document.

Chapter 12. Program Header

12.1. Types

12.2. Flags

Chapter 13. Program Loading

Chapter 14. Dynamic Linking

14.1. Dynamic Section

1 The following dynamic entries are defined in the System V Application Binary Interface AMD64 Architecture
2 Processor Supplement, ~~Draft Version 0.90~~.

3 DT_JMPREL

4 This entry is associated with a table of relocation entries for the procedure linkage table. This entry is mandatory
5 both for executable and shared object files

6 DT_PLTGOT

7 This entry's `d_ptr` member gives the address of the first byte in the procedure linkage table

8 DT_RELACOUNT

9 The number of relative relocations in `.rela.dyn`

14.2. Global Offset Table

10 The Global Offset Table is defined in Chapter 5 of System V Application Binary Interface AMD64 Architecture
11 Processor Supplement, ~~Draft Version 0.90~~.

14.3. Shared Object Dependencies

14.4. Function Addresses

14.5. Procedure Linkage Table

14.6. Initialization and Termination Functions

Linux Standard Base Specification

2

3 **Linux Standard Base Specification**

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I. Base Libraries

Chapter 1. Libraries

- 1 An LSB-conforming implementation shall support some base libraries which provide interfaces for accessing the
 2 operating system, processor and other hardware in the system.
- 3 Interfaces that are unique to the AMD64 platform are defined here. This section should be used in conjunction with the
 4 corresponding section in the Linux Standard Base Specification.

1.1. Program Interpreter/Dynamic Linker

- 5 The LSB specifies the Program Interpreter to be /lib64/ld-lsb-x86-64.so.2.

1.2. Interfaces for libc

- 6 Table 1-1 defines the library name and shared object name for the libc library

7 **Table 1-1. libc Definition**

Library:	libc
SONAME:	libc.so.6

- 9 The behavior of the interfaces in this library is specified by the following specifications:

Large File Support

~~Linux Standard Base~~ this specification

~~CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0, C606) SUSv2~~

~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3) System V Interface Definition, SVID Issue 3 (ISBN 0201566524)~~

~~System V Interface Definition, Fourth Edition SVID Issue 4~~

10

1.2.1. RPC

1.2.1.1. Interfaces for RPC

- 11 An LSB conforming implementation shall provide the architecture specific functions for RPC specified in Table 1-2,
 12 with the full functionality as described in the referenced underlying specification.

14 **Table 1-2. libc - RPC Function Interfaces**

authnone_create(GLIBC_2.2.5)authnone_create(GLIBC_2.2.5) [1]	pmap_unset(GLIBC_2.2.5)pmap_unset(GLIBC_2.2.5) [2]	svcerr_weakauth(GLIBC_2.2.5)svcerr_weakauth(GLIBC_2.2.5) [3]	xdr_float(GLIBC_2.2.5)xdr_float(GLIBC_2.2.5) [3]	xdr_u_char(GLIBC_2.2.5)xdr_u_char(GLIBC_2.2.5) [3]
clnt_create(GLIBC_2.2.5)clnt_create(G	setdomainname(GLIBC_2.2.5)setdomai	svctcp_create(GLIBC_2.2.5)svctcp_crea	xdr_free(GLIBC_2.2.5)xdr_free(GLIB	xdr_u_int(GLIBC_2.2.5)xdr_u_int(GLI

LIBC_2.2.5) [1]	nname(GLIBC_2.2.5) [2]	te(GLIBC_2.2.5) [2]	C_2.2.5) [3]	BC_2.2.5) [2]
elnt_pcreateerror(GLIBC_2.2.5)cint_pcreateerror(GLIBC_2.2.5) [1]	svc_getreqset(GLIBC_2.2.5)svc_getreqset(GLIBC_2.2.5) [3]	svcupd_create(GLIBC_2.2.5)svcupd_create(GLIBC_2.2.5) [2]	xdr_int(GLIBC_2.2.5)xdr_int(GLIBC_2.2.5) [3]	xdr_u_long(GLIBC_2.2.5)xdr_u_long(GLIBC_2.2.5) [3]
elnt_permno(GLIBC_2.2.5)cint_permno(GLIBC_2.2.5) [1]	svc_register(GLIBC_2.2.5)svc_register(GLIBC_2.2.5) [2]	xdr_accepted_reply(GLIBC_2.2.5)xdr_accepted_reply(GLIBC_2.2.5) [3]	xdr_long(GLIBC_2.2.5)xdr_long(GLIBC_2.2.5) [3]	xdr_u_short(GLIBC_2.2.5)xdr_u_short(GLIBC_2.2.5) [3]
elnt_perror(GLIBC_2.2.5)cint_perror(GLIBC_2.2.5) [1]	svc_run(GLIBC_2.2.5)svc_run(GLIBC_2.2.5) [2]	xdr_array(GLIBC_2.2.5)xdr_array(GLIBC_2.2.5) [3]	xdr_opaque(GLIBC_2.2.5)xdr_opaque(GLIBC_2.2.5) [3]	xdr_union(GLIBC_2.2.5)xdr_union(GLIBC_2.2.5) [3]
elnt_sprecreateerror(GLIBC_2.2.5)cint_sprecreateerror(GLIBC_2.2.5) [1]	svc_sendreply(GLIBC_2.2.5)svc_sendreply(GLIBC_2.2.5) [2]	xdr_bool(GLIBC_2.2.5)xdr_bool(GLIBC_2.2.5) [3]	xdr_opaque_auth(GLIBC_2.2.5)xdr_opaque_auth(GLIBC_2.2.5) [3]	xdr_vector(GLIBC_2.2.5)xdr_vector(GLIBC_2.2.5) [3]
elnt_sperno(GLIBC_2.2.5)cint_sperno(GLIBC_2.2.5) [1]	svcerr_auth(GLIBC_2.2.5)svcerr_auth(GLIBC_2.2.5) [3]	xdr_bytes(GLIBC_2.2.5)xdr_bytes(GLIBC_2.2.5) [3]	xdr_pointer(GLIBC_2.2.5)xdr_pointer(GLIBC_2.2.5) [3]	xdr_void(GLIBC_2.2.5)xdr_void(GLIBC_2.2.5) [3]
elnt_spperror(GLIBC_2.2.5)cint_spperror(GLIBC_2.2.5) [1]	svcerr_decode(GLIBC_2.2.5)svcerr_decode(GLIBC_2.2.5) [3]	xdr_callhdr(GLIBC_2.2.5)xdr_callhdr(GLIBC_2.2.5) [3]	xdr_reference(GLIBC_2.2.5)xdr_reference(GLIBC_2.2.5) [3]	xdr_wrapstring(GLIBC_2.2.5)xdr_wrapstring(GLIBC_2.2.5) [3]
getdomainname(GLIBC_2.2.5)getdomainname(GLIBC_2.2.5) [2]	svcerr_noproc(GLIBC_2.2.5)svcerr_noproc(GLIBC_2.2.5) [3]	xdr_callmsg(GLIBC_2.2.5)xdr_callmsg(GLIBC_2.2.5) [3]	xdr_rejected_reply(GLIBC_2.2.5)xdr_rejected_reply(GLIBC_2.2.5) [3]	xdrmem_create(GLIBC_2.2.5)xdrmem_create(GLIBC_2.2.5) [3]
key_decryptsession(GLIBC_2.2.5)key_decryptsession(GLIBC_2.2.5) [3]	svcerr_noprog(GLIBC_2.2.5)svcerr_noprog(GLIBC_2.2.5) [3]	xdr_char(GLIBC_2.2.5)xdr_char(GLIBC_2.2.5) [3]	xdr_replymsg(GLIBC_2.2.5)xdr_replymsg(GLIBC_2.2.5) [3]	xdrrec_create(GLIBC_2.2.5)xdrrec_create(GLIBC_2.2.5) [3]
pmap_getport(GLIBC_2.2.5)pmap_getport(GLIBC_2.2.5) [2]	svcerr_progvers(GLIBC_2.2.5)svcerr_progvers(GLIBC_2.2.5) [3]	xdr_double(GLIBC_2.2.5)xdr_double(GLIBC_2.2.5) [3]	xdr_short(GLIBC_2.2.5)xdr_short(GLIBC_2.2.5) [3]	xdrrec_eof(GLIBC_2.2.5)xdrrec_eof(GLIBC_2.2.5) [3]
pmap_set(GLIBC_2.2.5)pmap_set(GLIBC_2.2.5) [2]	svcerr_systemerr(GLIBC_2.2.5)svcerr_systemerr(GLIBC_2.2.5) [3]	xdr_enum(GLIBC_2.2.5)xdr_enum(GLIBC_2.2.5) [3]	xdr_string(GLIBC_2.2.5)xdr_string(GLIBC_2.2.5) [3]	

15

16 *Referenced Specification(s)*

- 17 [1]. System V Interface Definition, Fourth Edition SVID Issue 4
 18 [2]. Linux Standard Base this specification
 19 [3]. System V Interface Definition, SVID Issue 3 (ISBN 0201566524)

1.2.2. System Calls

1.2.2.1. Interfaces for System Calls

21 An LSB conforming implementation shall provide the architecture specific functions for System Calls specified in
 22 Table 1-3, with the full functionality as described in the referenced underlying specification.

23 **Table 1-3. libc - System Calls Function Interfaces**

__fxstat(GLIBC_2.2.5) __fxstat(GLIBC_2.2.5) [1]	fehmod(GLIBC_2.2.5) fchmod(GLIBC_2.2.5) [2]	getwd(GLIBC_2.2.5) getwd(GLIBC_2.2.5) [2]	read(GLIBC_2.2.5) read(GLIBC_2.2.5) [2]	setrlimit(GLIBC_2.2.5) setrlimit(GLIBC_2.2.5) [2]
__getpgid(GLIBC_2.2.5) __getpgid(GLIBC_2.2.5) [1]	fehown(GLIBC_2.2.5) fchown(GLIBC_2.2.5) [2]	initgroups(GLIBC_2.2.5) initgroups(GLIBC_2.2.5) [1]	readdir(GLIBC_2.2.5) readdir(GLIBC_2.2.5) [2]	setrlimit64(GLIBC_2.2.5) setrlimit64(GLIBC_2.2.5) [3]
__lxstat(GLIBC_2.2.5) __lxstat(GLIBC_2.2.5) [1]	fcntl(GLIBC_2.2.5) fcntl(GLIBC_2.2.5) [1]	ioctl(GLIBC_2.2.5) ioctl(GLIBC_2.2.5) [1]	readdir_r(GLIBC_2.2.5) readdir_r(GLIBC_2.2.5) [2]	setsid(GLIBC_2.2.5) setsid(GLIBC_2.2.5) [2]
__xmknod(GLIBC_2.2.5) __xmknod(GLIBC_2.2.5) [1]	fdatasync(GLIBC_2.2.5) fdatasync(GLIBC_2.2.5) [2]	kill(GLIBC_2.2.5) kill(GLIBC_2.2.5) [1]	readlink(GLIBC_2.2.5) readlink(GLIBC_2.2.5) [2]	setuid(GLIBC_2.2.5) setuid(GLIBC_2.2.5) [2]
__xstat(GLIBC_2.2.5) __xstat(GLIBC_2.2.5) [1]	flock(GLIBC_2.2.5) flock(GLIBC_2.2.5) [1]	killpg(GLIBC_2.2.5) killpg(GLIBC_2.2.5) [2]	readv(GLIBC_2.2.5) readv(GLIBC_2.2.5) [2]	sleep(GLIBC_2.2.5) sleep(GLIBC_2.2.5) [2]
access(GLIBC_2.2.5) access(GLIBC_2.2.5) [2]	fork(GLIBC_2.2.5) fork(GLIBC_2.2.5) [2]	lchown(GLIBC_2.2.5) lchown(GLIBC_2.2.5) [2]	rename(GLIBC_2.2.5) rename(GLIBC_2.2.5) [2]	statvfs(GLIBC_2.2.5) statvfs(GLIBC_2.2.5) [2]
aect(GLIBC_2.2.5) acct(GLIBC_2.2.5) [1]	fstatvfs(GLIBC_2.2.5) fstatvfs(GLIBC_2.2.5) [2]	link(GLIBC_2.2.5) link(GLIBC_2.2.5) [2]	rmdir(GLIBC_2.2.5) rmdir(GLIBC_2.2.5) [2]	stime(GLIBC_2.2.5) stime(GLIBC_2.2.5) [1]
alarm(GLIBC_2.2.5) alarm(GLIBC_2.2.5) [2]	fsync(GLIBC_2.2.5) fsync(GLIBC_2.2.5) [2]	lockf(GLIBC_2.2.5) lockf(GLIBC_2.2.5) [2]	sbrk(GLIBC_2.2.5) sbrk(GLIBC_2.2.5) [4]	symlink(GLIBC_2.2.5) symlink(GLIBC_2.2.5) [2]
brk(GLIBC_2.2.5) brk(GLIBC_2.2.5) [4]	ftime(GLIBC_2.2.5) ftime(GLIBC_2.2.5) [2]	lseek(GLIBC_2.2.5) lseek(GLIBC_2.2.5) [2]	sched_get_priority_max(GLIBC_2.2.5) sched_get_priority_max(GLIBC_2.2.5) [2]	sync(GLIBC_2.2.5) sync(GLIBC_2.2.5) [2]
chdir(GLIBC_2.2.5) chdir(GLIBC_2.2.5)	ftruncate(GLIBC_2.2.5) ftruncate(GLIBC_2.2.5)	mkdir(GLIBC_2.2.5) mkdir(GLIBC_2.2.5)	sched_get_priority_min(GLIBC_2.2.5) sched_get_priority_min(GLIBC_2.2.5)	sysconf(GLIBC_2.2.5) sysconf(GLIBC_2.2.5)

<code>chdir(GLIBC_2.2.5)</code> [2]	<code>truncate(GLIBC_2.2.5)</code> [2]	<code>mkdir(GLIBC_2.5)</code> [2]	<code>min(GLIBC_2.2.5)sched_get_priority_min(GLIBC_2.2.5)</code> [2]	<code>sysconf(GLIBC_2.2.5)</code> [2]
<code>chmod(GLIBC_2.2.5)</code> <code>chmod(GLIBC_2.2.5)</code> [2]	<code>getecontext(GLIBC_2.2.5)</code> <code>getcontext(GLIBC_2.2.5)</code> [2]	<code>mkfifo(GLIBC_2.2.5)</code> <code>mkfifo(GLIBC_2.2.5)</code> [2]	<code>sched_getparam(GLIBC_2.2.5)</code> <code>sched_getparam(GLIBC_2.2.5)</code> [2]	<code>time(GLIBC_2.2.5)</code> <code>time(GLIBC_2.2.5)</code> [2]
<code>chown(GLIBC_2.2.5)</code> <code>chown(GLIBC_2.2.5)</code> [2]	<code>getegid(GLIBC_2.2.5)</code> <code>getegid(GLIBC_2.2.5)</code> [2]	<code>mlock(GLIBC_2.2.5)</code> <code>mlock(GLIBC_2.2.5)</code> [2]	<code>sched_getscheduler(GLIBC_2.2.5)</code> <code>sched_getscheduler(GLIBC_2.2.5)</code> [2]	<code>times(GLIBC_2.2.5)</code> <code>times(GLIBC_2.2.5)</code> [2]
<code>chroot(GLIBC_2.2.5)</code> <code>chroot(GLIBC_2.2.5)</code> [4]	<code>geteuid(GLIBC_2.2.5)</code> <code>geteuid(GLIBC_2.2.5)</code> [2]	<code>mlockall(GLIBC_2.2.5)</code> <code>mlockall(GLIBC_2.2.5)</code> [2]	<code>sched_rr_get_interval(GLIBC_2.2.5)</code> <code>sched_rr_get_interval(GLIBC_2.2.5)</code> [2]	<code>truncate(GLIBC_2.2.5)</code> <code>truncate(GLIBC_2.2.5)</code> [2]
<code>clock(GLIBC_2.2.5)</code> <code>clock(GLIBC_2.2.5)</code> [2]	<code>getgid(GLIBC_2.2.5)</code> <code>getgid(GLIBC_2.2.5)</code> [2]	<code>mmap(GLIBC_2.2.5)</code> <code>mmap(GLIBC_2.2.5)</code> [2]	<code>sched_setparam(GLIBC_2.2.5)</code> <code>sched_setparam(GLIBC_2.2.5)</code> [2]	<code>ulimit(GLIBC_2.2.5)</code> <code>ulimit(GLIBC_2.2.5)</code> [2]
<code>close(GLIBC_2.2.5)</code> <code>close(GLIBC_2.2.5)</code> [2]	<code>getgroups(GLIBC_2.2.5)</code> <code>getgroups(GLIBC_2.2.5)</code> [2]	<code>mprotect(GLIBC_2.2.5)</code> <code>mprotect(GLIBC_2.2.5)</code> [2]	<code>sched_setscheduler(GLIBC_2.2.5)</code> <code>sched_setscheduler(GLIBC_2.2.5)</code> [2]	<code>umask(GLIBC_2.2.5)</code> <code>umask(GLIBC_2.2.5)</code> [2]
<code>closedir(GLIBC_2.2.5)</code> <code>closedir(GLIBC_2.2.5)</code> [2]	<code>getitimer(GLIBC_2.2.5)</code> <code>getitimer(GLIBC_2.2.5)</code> [2]	<code>msync(GLIBC_2.2.5)</code> <code>msync(GLIBC_2.2.5)</code> [2]	<code>sched_yield(GLIBC_2.2.5)</code> <code>sched_yield(GLIBC_2.2.5)</code> [2]	<code>uname(GLIBC_2.2.5)</code> <code>uname(GLIBC_2.2.5)</code> [2]
<code>creat(GLIBC_2.2.5)</code> <code>creat(GLIBC_2.2.5)</code> [1]	<code>getloadavg(GLIBC_2.2.5)</code> <code>getloadavg(GLIBC_2.2.5)</code> [1]	<code>munlock(GLIBC_2.2.5)</code> <code>munlock(GLIBC_2.2.5)</code> [2]	<code>select(GLIBC_2.2.5)</code> <code>select(GLIBC_2.2.5)</code> [2]	<code>unlink(GLIBC_2.2.5)</code> <code>unlink(GLIBC_2.2.5)</code> [1]
<code>dup(GLIBC_2.2.5)</code> <code>dup(GLIBC_2.2.5)</code> [2]	<code>getpagesize(GLIBC_2.2.5)</code> <code>getpagesize(GLIBC_2.2.5)</code> [4]	<code>munlockall(GLIBC_2.2.5)</code> <code>munlockall(GLIBC_2.2.5)</code> [2]	<code>setcontext(GLIBC_2.2.5)</code> <code>setcontext(GLIBC_2.2.5)</code> [2]	<code>utime(GLIBC_2.2.5)</code> <code>utime(GLIBC_2.2.5)</code> [2]
<code>dup2(GLIBC_2.2.5)</code> <code>dup2(GLIBC_2.2.5)</code> [2]	<code>getpgid(GLIBC_2.2.5)</code> <code>getpgid(GLIBC_2.2.5)</code> [2]	<code>munmap(GLIBC_2.2.5)</code> <code>munmap(GLIBC_2.2.5)</code> [2]	<code>setgid(GLIBC_2.2.5)</code> <code>setgid(GLIBC_2.2.5)</code> [2]	<code>utimes(GLIBC_2.2.5)</code> <code>utimes(GLIBC_2.2.5)</code> [2]
<code>execl(GLIBC_2.2.5)</code> <code>execl(GLIBC_2.2.5)</code> [2]	<code>getpgrp(GLIBC_2.2.5)</code> <code>getpgrp(GLIBC_2.2.5)</code> [2]	<code>nanosleep(GLIBC_2.2.5)</code> <code>nanosleep(GLIBC_2.2.5)</code> [2]	<code>setuid(GLIBC_2.2.5)</code> <code>setuid(GLIBC_2.2.5)</code> [2]	<code>vfork(GLIBC_2.2.5)</code> <code>vfork(GLIBC_2.2.5)</code> [2]
<code>execle(GLIBC_2.2.5)</code> <code>execle(GLIBC_2.2.5)</code> [2]	<code>getpid(GLIBC_2.2.5)</code> <code>getpid(GLIBC_2.2.5)</code> [2]	<code>nice(GLIBC_2.2.5)</code> <code>nice(GLIBC_2.2.5)</code> [2]	<code>setgid(GLIBC_2.2.5)</code> <code>setgid(GLIBC_2.2.5)</code> [2]	<code>wait(GLIBC_2.2.5)</code> <code>wait(GLIBC_2.2.5)</code> [2]

2.5) [2]	2.5) [2]	[2]	5) [2]	[2]
execlp(GLIBC_2.2.5)execlp(GLIBC_2.2.5) [2]	getppid(GLIBC_2.2.5)getppid(GLIBC_2.2.5) [2]	open(GLIBC_2.2.5)open(GLIBC_2.2.5) [1]	setitimer(GLIBC_2.2.5)setitimer(GLIBC_2.2.5) [2]	wait3(GLIBC_2.2.5)wait3(GLIBC_2.2.5) [1]
execv(GLIBC_2.2.5)execv(GLIBC_2.2.5) [2]	getpriority(GLIBC_2.2.5)getpriority(GLIBC_2.2.5) [2]	opendir(GLIBC_2.2.5)opendir(GLIBC_2.2.5) [2]	setpgid(GLIBC_2.2.5)setpgid(GLIBC_2.2.5) [2]	wait4(GLIBC_2.2.5)wait4(GLIBC_2.2.5) [1]
execve(GLIBC_2.2.5)execve(GLIBC_2.2.5) [2]	getrlimit(GLIBC_2.2.5)getrlimit(GLIBC_2.2.5) [2]	pathconf(GLIBC_2.2.5)pathconf(GLIBC_2.2.5) [2]	setpgrp(GLIBC_2.2.5)setpgrp(GLIBC_2.2.5) [2]	waitpid(GLIBC_2.2.5)waitpid(GLIBC_2.2.5) [1]
execvp(GLIBC_2.2.5)execvp(GLIBC_2.2.5) [2]	getrusage(GLIBC_2.2.5)getrusage(GLIBC_2.2.5) [2]	pause(GLIBC_2.2.5)pause(GLIBC_2.2.5) [2]	setpriority(GLIBC_2.2.5)setpriority(GLIBC_2.2.5) [2]	write(GLIBC_2.2.5)write(GLIBC_2.2.5) [2]
exit(GLIBC_2.2.5)exit(GLIBC_2.2.5) [2]	getsid(GLIBC_2.2.5)getsid(GLIBC_2.2.5) [2]	pipe(GLIBC_2.2.5)pipe(GLIBC_2.2.5) [2]	setregid(GLIBC_2.2.5)setregid(GLIBC_2.2.5) [2]	writew(GLIBC_2.2.5)writew(GLIBC_2.2.5) [2]
fchdir(GLIBC_2.2.5)fchdir(GLIBC_2.2.5) [2]	getuid(GLIBC_2.2.5)getuid(GLIBC_2.2.5) [2]	poll(GLIBC_2.2.5)poll(GLIBC_2.2.5) [2]	setreuid(GLIBC_2.2.5)setreuid(GLIBC_2.2.5) [2]	

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25 *Referenced Specification(s)*26 [1]. ~~Linux Standard Base~~this specification27 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

28 [3]. Large File Support

29 [4]. ~~CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0, €606)SUSv2~~

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1.2.3. Standard I/O

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1.2.3.1. Interfaces for Standard I/O

33 An LSB conforming implementation shall provide the architecture specific functions for Standard I/O specified in
34 Table 1-4, with the full functionality as described in the referenced underlying specification.35 **Table 1-4. libc - Standard I/O Function Interfaces**

_IO_feof(GLIBC_2.2.5)_IO_feof(GLIBC_2.2.5) [1]	fgetpos(GLIBC_2.2.5)fgetpos(GLIBC_2.2.5) [2]	fsetpos(GLIBC_2.2.5)fsetpos(GLIBC_2.2.5) [2]	putchar(GLIBC_2.2.5)putchar(GLIBC_2.2.5) [2]	sscanf(GLIBC_2.2.5)sscanf(GLIBC_2.2.5) [2]
_IO_getc(GLIBC_2.2.5)_IO_getc(GLIBC_2.2.5) [1]	fgets(GLIBC_2.2.5)fgets(GLIBC_2.2.5) [2]	ftell(GLIBC_2.2.5)ftell(GLIBC_2.2.5) [2]	putchar_unlocked(GLIBC_2.2.5)putchar_unlocked(GLIBC_2.2.5) [2]	telldir(GLIBC_2.2.5)telldir(GLIBC_2.2.5) [2]

			2.2.5) [2]	
<code>_IO_putc(GLIBC_2.2.5)_IO_putc(GLIBC_2.2.5)</code> [1]	<code>fgetwe_unlocked(GLIBC_2.2.5)fgetwc_unlocked(GLIBC_2.2.5)</code> [1]	<code>ftello(GLIBC_2.2.5)ftello(GLIBC_2.2.5)</code> [2]	<code>puts(GLIBC_2.2.5)puts(GLIBC_2.2.5)</code> [2]	<code>tempnam(GLIBC_2.2.5)tempnam(GLIBC_2.2.5)</code> [2]
<code>_IO_puts(GLIBC_2.2.5)_IO_puts(GLIBC_2.2.5)</code> [1]	<code>fileno(GLIBC_2.2.5)fileno(GLIBC_2.2.5)</code> [2]	<code>fwrite(GLIBC_2.2.5)fwrite(GLIBC_2.2.5)</code> [2]	<code>putw(GLIBC_2.2.5)putw(GLIBC_2.2.5)</code> [3]	<code>ungetc(GLIBC_2.2.5)ungetc(GLIBC_2.2.5)</code> [2]
<code>asprintf(GLIBC_2.2.5)asprintf(GLIBC_2.2.5)</code> [1]	<code>flockfile(GLIBC_2.2.5)flockfile(GLIBC_2.2.5)</code> [2]	<code>getc(GLIBC_2.2.5)getc(GLIBC_2.2.5)</code> [2]	<code>remove(GLIBC_2.2.5)remove(GLIBC_2.2.5)</code> [2]	<code>vasprintf(GLIBC_2.2.5)vasprintf(GLIBC_2.2.5)</code> [1]
<code>clearerr(GLIBC_2.2.5)clearerr(GLIBC_2.2.5)</code> [2]	<code>fopen(GLIBC_2.2.5)fopen(GLIBC_2.2.5)</code> [1]	<code>getc_unlocked(GLIBC_2.2.5)getc_unlocked(GLIBC_2.2.5)</code> [2]	<code>rewind(GLIBC_2.2.5)rewind(GLIBC_2.2.5)</code> [2]	<code>vdprintf(GLIBC_2.2.5)vdprintf(GLIBC_2.2.5)</code> [1]
<code>etermid(GLIBC_2.2.5)ctermid(GLIBC_2.2.5)</code> [2]	<code>fprintf(GLIBC_2.2.5)fprintf(GLIBC_2.2.5)</code> [2]	<code>getchar(GLIBC_2.2.5)getchar(GLIBC_2.2.5)</code> [2]	<code>rewinddir(GLIBC_2.2.5)rewinddir(GLIBC_2.2.5)</code> [2]	<code>vfprintf(GLIBC_2.2.5)vfprintf(GLIBC_2.2.5)</code> [2]
<code>fclose(GLIBC_2.2.5)fclose(GLIBC_2.2.5)</code> [2]	<code>fputc(GLIBC_2.2.5)fputc(GLIBC_2.2.5)</code> [2]	<code>getchar_unlocked(GLIBC_2.2.5)getchar_unlocked(GLIBC_2.2.5)</code> [2]	<code>scanf(GLIBC_2.2.5)scanf(GLIBC_2.2.5)</code> [2]	<code>vprintf(GLIBC_2.2.5)vprintf(GLIBC_2.2.5)</code> [2]
<code>fdopen(GLIBC_2.2.5)fdopen(GLIBC_2.2.5)</code> [2]	<code>fputs(GLIBC_2.2.5)fputs(GLIBC_2.2.5)</code> [2]	<code>getw(GLIBC_2.2.5)getw(GLIBC_2.2.5)</code> [3]	<code>seekdir(GLIBC_2.2.5)seekdir(GLIBC_2.2.5)</code> [2]	<code>vsprintf(GLIBC_2.2.5)vsprintf(GLIBC_2.2.5)</code> [2]
<code>feof(GLIBC_2.2.5)feof(GLIBC_2.2.5)</code> [2]	<code>fread(GLIBC_2.2.5)fread(GLIBC_2.2.5)</code> [2]	<code>pclose(GLIBC_2.2.5)pclose(GLIBC_2.2.5)</code> [2]	<code>setbuf(GLIBC_2.2.5)setbuf(GLIBC_2.2.5)</code> [2]	<code>vsprintf(GLIBC_2.2.5)vsprintf(GLIBC_2.2.5)</code> [2]
<code>ferror(GLIBC_2.2.5)ferror(GLIBC_2.2.5)</code> [2]	<code>freopen(GLIBC_2.2.5)freopen(GLIBC_2.2.5)</code> [1]	<code>popen(GLIBC_2.2.5)popen(GLIBC_2.2.5)</code> [2]	<code>setbuffer(GLIBC_2.2.5)setbuffer(GLIBC_2.2.5)</code> [1]	
<code>fflush(GLIBC_2.2.5)fflush(GLIBC_2.2.5)</code> [2]	<code>fscanf(GLIBC_2.2.5)fscanf(GLIBC_2.2.5)</code> [2]	<code>printf(GLIBC_2.2.5)printf(GLIBC_2.2.5)</code> [2]	<code>setvbuf(GLIBC_2.2.5)setvbuf(GLIBC_2.2.5)</code> [2]	
<code>fflush_unlocked(GLIBC_2.2.5)fflush_unlocked(GLIBC_2.2.5)</code> [1]	<code>fseek(GLIBC_2.2.5)fseek(GLIBC_2.2.5)</code> [2]	<code>putc(GLIBC_2.2.5)putc(GLIBC_2.2.5)</code> [2]	<code>snprintf(GLIBC_2.2.5)snprintf(GLIBC_2.2.5)</code> [2]	
<code>fgetc(GLIBC_2.2.5)fgetc(GLIBC_2.2.5)</code> [2]	<code>fseeko(GLIBC_2.2.5)fseeko(GLIBC_2.2.5)</code> [2]	<code>putc_unlocked(GLIBC_2.2.5)putc_unlocked(GLIBC_2.2.5)</code> [2]	<code>sprintf(GLIBC_2.2.5)sprintf(GLIBC_2.2.5)</code> [2]	

		[2]		
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37 *Referenced Specification(s)*38 [1]. ~~Linux Standard Base~~this specification39 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~40
41 [3]. ~~CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0, C606) SUSv2~~

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43 An LSB conforming implementation shall provide the architecture specific data interfaces for Standard I/O specified
44 in Table 1-5, with the full functionality as described in the referenced underlying specification.45 **Table 1-5. libc - Standard I/O Data Interfaces**

stderr(GLIBC_2.2.5) stderr(GLIBC_2.2.5) [1]	stdin(GLIBC_2.2.5) stdin(GLIBC_2.2.5) [1]	stdout(GLIBC_2.2.5) stdout(GLIBC_2.2.5) [1]		
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47 *Referenced Specification(s)*48 [1]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

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1.2.4. Signal Handling

50 **1.2.4.1. Interfaces for Signal Handling**51 An LSB conforming implementation shall provide the architecture specific functions for Signal Handling specified in
52 Table 1-6, with the full functionality as described in the referenced underlying specification.53 **Table 1-6. libc - Signal Handling Function Interfaces**

__libc_current_sigrt_max(GLIBC_2.2.5) __libc_current_sigrt_max(GLIBC_2.2.5) [1]	sigaddset(GLIBC_2.2.5) sigaddset(GLIBC_2.2.5) [2]	sighold(GLIBC_2.2.5) sighold(GLIBC_2.2.5) [2]	sigpause(GLIBC_2.2.5) sigpause(GLIBC_2.2.5) [2]	sigsuspend(GLIBC_2.2.5) sigsuspend(GLIBC_2.2.5) [2]
__libc_current_sigrt_min(GLIBC_2.2.5) __libc_current_sigrt_min(GLIBC_2.2.5) [1]	sigaltstack(GLIBC_2.2.5) sigaltstack(GLIBC_2.2.5) [2]	sigignore(GLIBC_2.2.5) sigignore(GLIBC_2.2.5) [2]	sigpending(GLIBC_2.2.5) sigpending(GLIBC_2.2.5) [2]	sigtimedwait(GLIBC_2.2.5) sigtimedwait(GLIBC_2.2.5) [2]
__sigsetjmp(GLIBC_2.2.5) __sigsetjmp(GLIBC_2.2.5) [1]	sigandset(GLIBC_2.2.5) sigandset(GLIBC_2.2.5) [1]	siginterrupt(GLIBC_2.2.5) siginterrupt(GLIBC_2.2.5) [2]	sigprocmask(GLIBC_2.2.5) sigprocmask(GLIBC_2.2.5) [2]	sigwait(GLIBC_2.2.5) sigwait(GLIBC_2.2.5) [2]
__sysv_signal(GLIBC_2.2.5) __sysv_signal(GLIBC_2.2.5)	sigblock(GLIBC_2.2.5) sigblock(GLIBC_2.2.5)	sigisemptyset(GLIBC_2.2.5) sigisemptyset(GLIBC_2.2.5)	sigqueue(GLIBC_2.2.5) sigqueue(GLIBC_2.2.5)	sigwaitinfo(GLIBC_2.2.5) sigwaitinfo(GLIBC_2.2.5)

gnal(GLIBC_2.2.5) [1]	C_2.2.5) [1]	et(GLIBC_2.2.5) [1]	C_2.2.5) [2]	GLIBC_2.2.5) [2]
bsd_signal(GLIBC_2.2.5)bsd_signal(GLIBC_2.2.5) [2]	sigdelset(GLIBC_2.2.5)sigdelset(GLIBC_2.2.5) [2]	sigismember(GLIBC_2.2.5)sigismember(GLIBC_2.2.5) [2]	sigrelse(GLIBC_2.2.5)sigrelse(GLIBC_2.2.5) [2]	
psignal(GLIBC_2.2.5)psignal(GLIBC_2.2.5) [1]	sigemptyset(GLIBC_2.2.5)sigemptyset(GLIBC_2.2.5) [2]	siglongjmp(GLIBC_2.2.5)siglongjmp(GLIBC_2.2.5) [2]	sigreturn(GLIBC_2.2.5)sigreturn(GLIBC_2.2.5) [1]	
raise(GLIBC_2.2.5)raise(GLIBC_2.2.5) [2]	sigfillset(GLIBC_2.2.5)sigfillset(GLIBC_2.2.5) [2]	signal(GLIBC_2.2.5)signal(GLIBC_2.2.5) [2]	sigset(GLIBC_2.2.5)sigset(GLIBC_2.2.5) [2]	
sigaction(GLIBC_2.2.5)sigaction(GLIBC_2.2.5) [2]	siggetmask(GLIBC_2.2.5)siggetmask(GLIBC_2.2.5) [1]	sigorset(GLIBC_2.2.5)sigorset(GLIBC_2.2.5) [1]	sigstack(GLIBC_2.2.5)sigstack(GLIBC_2.2.5) [3]	

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55 *Referenced Specification(s)*56 [1]. ~~Linux Standard Base~~this specification57 [2]. ISO/IEC 9945: POSIX (2003 ~~Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)~~
58 ~~V3~~)59 [3]. ~~CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0, C606)~~SUSv2

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61 An LSB conforming implementation shall provide the architecture specific data interfaces for Signal Handling
62 specified in Table 1-7, with the full functionality as described in the referenced underlying specification.63 **Table 1-7. libc - Signal Handling Data Interfaces**

_sys_siglist (GLIBC_2.3.3) _sys_siglist (GLIBC_2.3.3) [1]				
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65 *Referenced Specification(s)*66 [1]. ~~Linux Standard Base~~this specification

1.2.5. Localization Functions

1.2.5.1. Interfaces for Localization Functions

68 An LSB conforming implementation shall provide the architecture specific functions for Localization Functions
69 specified in Table 1-8, with the full functionality as described in the referenced underlying specification.70 **Table 1-8. libc - Localization Functions Function Interfaces**

bind_textdomain_co	eatopen(GLIBC_2.2	dngettext(GLIBC_2	iconv_open(GLIBC	setlocale(GLIBC_2.
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<code>deset(GLIBC_2.2.5)</code> <code>bind_textdomain_co</code> <code>deset(GLIBC_2.2.5)</code> [1]	<code>catopen(GLIBC_2.2.5)</code> [2]	<code>dngettext(GLIBC_2.2.5)</code> [1]	<code>iconv_open(GLIBC_2.2.5)</code> [2]	<code>setlocale(GLIBC_2.2.5)</code> [2]
<code>bindtextdomain(GLIBC_2.2.5)</code> <code>bindtextdomain(GLIBC_2.2.5)</code> [1]	<code>dcgettext(GLIBC_2.2.5)</code> <code>dcgettext(GLIBC_2.2.5)</code> [1]	<code>gettext(GLIBC_2.2.5)</code> <code>gettext(GLIBC_2.2.5)</code> [1]	<code>localeconv(GLIBC_2.2.5)</code> <code>localeconv(GLIBC_2.2.5)</code> [2]	<code>textdomain(GLIBC_2.2.5)</code> <code>textdomain(GLIBC_2.2.5)</code> [1]
<code>catclose(GLIBC_2.2.5)</code> <code>catclose(GLIBC_2.2.5)</code> [2]	<code>dcngettext(GLIBC_2.2.5)</code> <code>dcngettext(GLIBC_2.2.5)</code> [1]	<code>iconv(GLIBC_2.2.5)</code> <code>iconv(GLIBC_2.2.5)</code> [2]	<code>ngettext(GLIBC_2.2.5)</code> <code>ngettext(GLIBC_2.2.5)</code> [1]	
<code>catgets(GLIBC_2.2.5)</code> <code>catgets(GLIBC_2.2.5)</code> [2]	<code>dgettext(GLIBC_2.2.5)</code> <code>dgettext(GLIBC_2.2.5)</code> [1]	<code>iconv_close(GLIBC_2.2.5)</code> <code>iconv_close(GLIBC_2.2.5)</code> [2]	<code>nl_langinfo(GLIBC_2.2.5)</code> <code>nl_langinfo(GLIBC_2.2.5)</code> [2]	

71

72 *Referenced Specification(s)*73 [1]. ~~Linux Standard Base~~this specification

74 [2]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)

75

76 An LSB conforming implementation shall provide the architecture specific data interfaces for Localization Functions specified in Table 1-9, with the full functionality as described in the referenced underlying specification.

77

78 **Table 1-9. libc - Localization Functions Data Interfaces**

<code>_nl_msg_cat_cntr(GLIBC_2.2.5)</code> <code>_nl_msg_cat_cntr(GLIBC_2.2.5)</code> [1]				
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80 *Referenced Specification(s)*81 [1]. ~~Linux Standard Base~~this specification

1.2.6. Socket Interface

1.2.6.1. Interfaces for Socket Interface

83 An LSB conforming implementation shall provide the architecture specific functions for Socket Interface specified in Table 1-10, with the full functionality as described in the referenced underlying specification.

84

85 **Table 1-10. libc - Socket Interface Function Interfaces**

<code>__h_errno_location(GLIBC_2.2.5)</code> <code>__h_errno_location(GLIBC_2.2.5)</code> [1]	<code>gethostid(GLIBC_2.2.5)</code> <code>gethostid(GLIBC_2.2.5)</code> [2]	<code>listen(GLIBC_2.2.5)</code> <code>listen(GLIBC_2.2.5)</code> [2]	<code>sendmsg(GLIBC_2.2.5)</code> <code>sendmsg(GLIBC_2.2.5)</code> [2]	<code>socketpair(GLIBC_2.2.5)</code> <code>socketpair(GLIBC_2.2.5)</code> [2]
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accept(GLIBC_2.2.5)accept(GLIBC_2.2.5) [2]	gethostname(GLIBC_2.2.5)gethostname(GLIBC_2.2.5) [2]	recv(GLIBC_2.2.5)recv(GLIBC_2.2.5) [2]	sendto(GLIBC_2.2.5)sendto(GLIBC_2.2.5) [2]	
bind(GLIBC_2.2.5)bind(GLIBC_2.2.5) [2]	getpeername(GLIBC_2.2.5)getpeername(GLIBC_2.2.5) [2]	recvfrom(GLIBC_2.2.5)recvfrom(GLIBC_2.2.5) [2]	setsockopt(GLIBC_2.2.5)setsockopt(GLIBC_2.2.5) [1]	
bindresvport(GLIBC_2.2.5)bindresvport(GLIBC_2.2.5) [1]	getsockname(GLIBC_2.2.5)getsockname(GLIBC_2.2.5) [2]	recvmsg(GLIBC_2.2.5)recvmsg(GLIBC_2.2.5) [2]	shutdown(GLIBC_2.2.5)shutdown(GLIBC_2.2.5) [2]	
connect(GLIBC_2.2.5)connect(GLIBC_2.2.5) [2]	getsockopt(GLIBC_2.2.5)getsockopt(GLIBC_2.2.5) [2]	send(GLIBC_2.2.5)send(GLIBC_2.2.5) [2]	socket(GLIBC_2.2.5)socket(GLIBC_2.2.5) [2]	

86

87 *Referenced Specification(s)*

88 [1]. ~~Linux Standard Base~~this specification

89 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

91 An LSB conforming implementation shall provide the architecture specific deprecated functions for Socket Interface specified in Table 1-11, with the full functionality as described in the referenced underlying specification.

93 These interfaces are deprecated, and applications should avoid using them. These interfaces may be withdrawn in future releases of this specification.

95 **Table 1-11. libc - Socket Interface Deprecated Function Interfaces**

gethostbyname_r(GLIBC_2.2.5)gethostbyname_r(GLIBC_2.2.5) [1]				
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97 *Referenced Specification(s)*

98 [1]. ~~Linux Standard Base~~this specification

1.2.7. Wide Characters

1.2.7.1. Interfaces for Wide Characters

100 An LSB conforming implementation shall provide the architecture specific functions for Wide Characters specified in Table 1-12, with the full functionality as described in the referenced underlying specification.

102 **Table 1-12. libc - Wide Characters Function Interfaces**

__wctod_internal(GLIBC_2.2.5)wctod_internal(GLIBC_2.2.5)	mbsinit(GLIBC_2.2.5)mbsinit(GLIBC_2.2.5)	vswscanf(GLIBC_2.2.5)vswscanf(GLIBC_2.2.5)	wcsnlen(GLIBC_2.2.5)wcsnlen(GLIBC_2.2.5)	wctoumax(GLIBC_2.2.5)wctoumax(GLIBC_2.2.5)
--	--	--	--	--

C_2.2.5) [1]	2.2.5) [2]	_2.2.5) [2]	_2.2.5) [1]	GLIBC_2.2.5) [2]
__westof_internal(GLIBC_2.2.5) westof_internal(GLIBC_2.2.5) [1]	mbsnrtowcs(GLIBC_2.2.5)mbsnrtowcs(GLIBC_2.2.5) [1]	wepepy(GLIBC_2.2.5)wcpcpy(GLIBC_2.2.5) [1]	wesnrtombs(GLIBC_2.2.5)wcnrtombs(GLIBC_2.2.5) [1]	westouq(GLIBC_2.2.5)wcstouq(GLIBC_2.2.5) [1]
__westol_internal(GLIBC_2.2.5) westol_internal(GLIBC_2.2.5) [1]	mbsrtowcs(GLIBC_2.2.5)mbsrtowcs(GLIBC_2.2.5) [2]	wepnepy(GLIBC_2.2.5)wcpncpy(GLIBC_2.2.5) [1]	wesprbk(GLIBC_2.2.5)wcpbrk(GLIBC_2.2.5) [2]	weswcs(GLIBC_2.2.5)wscwcs(GLIBC_2.2.5) [2]
__westold_internal(GLIBC_2.2.5) westold_internal(GLIBC_2.2.5) [1]	mbstowcs(GLIBC_2.2.5)mbstowcs(GLIBC_2.2.5) [2]	wertomb(GLIBC_2.2.5)wrtomb(GLIBC_2.2.5) [2]	wesrchr(GLIBC_2.2.5)wscrchr(GLIBC_2.2.5) [2]	weswidth(GLIBC_2.2.5)wscwidth(GLIBC_2.2.5) [2]
__westoul_internal(GLIBC_2.2.5) westoul_internal(GLIBC_2.2.5) [1]	mbtowc(GLIBC_2.2.5)mbtowc(GLIBC_2.2.5) [2]	weseasecmp(GLIBC_2.2.5)wscasecmp(GLIBC_2.2.5) [1]	wesrtombs(GLIBC_2.2.5)wcnrtombs(GLIBC_2.2.5) [2]	wesxfrm(GLIBC_2.2.5)wscxfrm(GLIBC_2.2.5) [2]
btowc(GLIBC_2.2.5) btowc(GLIBC_2.2.5) [2]	putwc(GLIBC_2.2.5)putwc(GLIBC_2.2.5) [2]	wecat(GLIBC_2.2.5)wscat(GLIBC_2.2.5) [2]	wesspn(GLIBC_2.2.5)wcsspn(GLIBC_2.2.5) [2]	wctob(GLIBC_2.2.5)wctob(GLIBC_2.2.5) [2]
fgetwc(GLIBC_2.2.5) fgetwc(GLIBC_2.2.5) [2]	putwchar(GLIBC_2.2.5)putwchar(GLIBC_2.2.5) [2]	weschr(GLIBC_2.2.5)wscchr(GLIBC_2.2.5) [2]	wesstr(GLIBC_2.2.5)wcssstr(GLIBC_2.2.5) [2]	wctomb(GLIBC_2.2.5)wctomb(GLIBC_2.2.5) [2]
fgetws(GLIBC_2.2.5) fgetws(GLIBC_2.2.5) [2]	swprintf(GLIBC_2.2.5)swprintf(GLIBC_2.2.5) [2]	wesemp(GLIBC_2.2.5)wscmp(GLIBC_2.2.5) [2]	westod(GLIBC_2.2.5)wcstod(GLIBC_2.2.5) [2]	wctrans(GLIBC_2.2.5)wctrans(GLIBC_2.2.5) [2]
fputwc(GLIBC_2.2.5) fputwc(GLIBC_2.2.5) [2]	swscanf(GLIBC_2.2.5)swscanf(GLIBC_2.2.5) [2]	wescoll(GLIBC_2.2.5)wscoll(GLIBC_2.2.5) [2]	westof(GLIBC_2.2.5)wcstof(GLIBC_2.2.5) [2]	wctype(GLIBC_2.2.5)wctype(GLIBC_2.2.5) [2]
fputws(GLIBC_2.2.5) fputws(GLIBC_2.2.5) [2]	towctrans(GLIBC_2.2.5)towctrans(GLIBC_2.2.5) [2]	wesepy(GLIBC_2.2.5)wscpy(GLIBC_2.2.5) [2]	westoimax(GLIBC_2.2.5)wcstoimax(GLIBC_2.2.5) [2]	wewidth(GLIBC_2.2.5)wcwidth(GLIBC_2.2.5) [2]
fwide(GLIBC_2.2.5) fwide(GLIBC_2.2.5) [2]	towlower(GLIBC_2.2.5)towlower(GLIBC_2.2.5) [2]	wesespn(GLIBC_2.2.5)wscspn(GLIBC_2.2.5) [2]	westok(GLIBC_2.2.5)wcstok(GLIBC_2.2.5) [2]	wmemchr(GLIBC_2.2.5)wmemchr(GLIBC_2.2.5) [2]
fwprintf(GLIBC_2.2.5) fwprintf(GLIBC_2.2.5) [2]	towupper(GLIBC_2.2.5)towupper(GLIBC_2.2.5) [2]	wesdup(GLIBC_2.2.5)wscdup(GLIBC_2.2.5) [1]	westol(GLIBC_2.2.5)wcstol(GLIBC_2.2.5) [2]	wmememp(GLIBC_2.2.5)wmemcmp(GLIBC_2.2.5) [2]
fwscanf(GLIBC_2.2.5) fwscanf(GLIBC_2.2.5) [2]	ungetwc(GLIBC_2.2.5)ungetwc(GLIBC_2.2.5) [2]	wesftime(GLIBC_2.2.5)wscftime(GLIBC_2.2.5) [2]	westold(GLIBC_2.2.5)wcstold(GLIBC_2.2.5) [2]	wmemepy(GLIBC_2.2.5)wmemcpy(GLIBC_2.2.5) [2]

<code>getwc(GLIBC_2.2.5)</code> <code>getwc(GLIBC_2.2.5)</code> [2]	<code>vfwprintf(GLIBC_2.2.5)</code> <code>vfwprintf(GLIBC_2.2.5)</code> [2]	<code>weslen(GLIBC_2.2.5)</code> <code>wcslen(GLIBC_2.2.5)</code> [2]	<code>westoll(GLIBC_2.2.5)</code> <code>wcstoll(GLIBC_2.2.5)</code> [2]	<code>wmemmove(GLIBC_2.2.5)</code> <code>wmemmove(GLIBC_2.2.5)</code> [2]
<code>getwchar(GLIBC_2.2.5)</code> <code>getwchar(GLIBC_2.2.5)</code> [2]	<code>vfwscanf(GLIBC_2.2.5)</code> <code>vfwscanf(GLIBC_2.2.5)</code> [2]	<code>wesnecasecmp(GLIBC_2.2.5)</code> <code>wcsncasecmp(GLIBC_2.2.5)</code> [1]	<code>wstombs(GLIBC_2.2.5)</code> <code>wcstombs(GLIBC_2.2.5)</code> [2]	<code>wmemset(GLIBC_2.2.5)</code> <code>wmemset(GLIBC_2.2.5)</code> [2]
<code>mblen(GLIBC_2.2.5)</code> <code>mblen(GLIBC_2.2.5)</code> [2]	<code>vswprintf(GLIBC_2.2.5)</code> <code>vswprintf(GLIBC_2.2.5)</code> [2]	<code>wesncat(GLIBC_2.2.5)</code> <code>wcsncat(GLIBC_2.2.5)</code> [2]	<code>wstoaq(GLIBC_2.2.5)</code> <code>wcstoaq(GLIBC_2.2.5)</code> [1]	<code>wprintf(GLIBC_2.2.5)</code> <code>wprintf(GLIBC_2.2.5)</code> [2]
<code>mbrlen(GLIBC_2.2.5)</code> <code>mbrlen(GLIBC_2.2.5)</code> [2]	<code>vswscanf(GLIBC_2.2.5)</code> <code>vswscanf(GLIBC_2.2.5)</code> [2]	<code>wesnemp(GLIBC_2.2.5)</code> <code>wcsncmp(GLIBC_2.2.5)</code> [2]	<code>wstoul(GLIBC_2.2.5)</code> <code>wcstoul(GLIBC_2.2.5)</code> [2]	<code>wscanf(GLIBC_2.2.5)</code> <code>wscanf(GLIBC_2.2.5)</code> [2]
<code>mbrtowc(GLIBC_2.2.5)</code> <code>mbrtowc(GLIBC_2.2.5)</code> [2]	<code>vwprintf(GLIBC_2.2.5)</code> <code>vwprintf(GLIBC_2.2.5)</code> [2]	<code>wesnecpy(GLIBC_2.2.5)</code> <code>wcsncpy(GLIBC_2.2.5)</code> [2]	<code>wstoull(GLIBC_2.2.5)</code> <code>wcstoull(GLIBC_2.2.5)</code> [2]	

103

104 *Referenced Specification(s)*

105 [1]. Linux Standard Basethis specification

106 [2]. ISO/IEC 9945: POSIX (2003-Portable Operating System(POSIX)and The Single UNIX® Specification(SUS)

107 V3)

1.2.8. String Functions

1.2.8.1. Interfaces for String Functions

109 An LSB conforming implementation shall provide the architecture specific functions for String Functions specified in
110 Table 1-13, with the full functionality as described in the referenced underlying specification.

111 **Table 1-13. libc - String Functions Function Interfaces**

<code>__mempcpy(GLIBC_2.2.5)</code> <code>__mempcpy(GLIBC_2.2.5)</code> [1]	<code>bzero(GLIBC_2.2.5)</code> <code>bzero(GLIBC_2.2.5)</code> [2]	<code>strecasestr(GLIBC_2.2.5)</code> <code>strecasestr(GLIBC_2.2.5)</code> [1]	<code>strncasecmp(GLIBC_2.2.5)</code> <code>strncasecmp(GLIBC_2.2.5)</code> [2]	<code>strtoimax(GLIBC_2.2.5)</code> <code>strtoimax(GLIBC_2.2.5)</code> [2]
<code>__rawmemchr(GLIBC_2.2.5)</code> <code>__rawmemchr(GLIBC_2.2.5)</code> [1]	<code>ffs(GLIBC_2.2.5)</code> <code>ffs(GLIBC_2.2.5)</code> [2]	<code>streat(GLIBC_2.2.5)</code> <code>streat(GLIBC_2.2.5)</code> [2]	<code>strncat(GLIBC_2.2.5)</code> <code>strncat(GLIBC_2.2.5)</code> [2]	<code>strtok(GLIBC_2.2.5)</code> <code>strtok(GLIBC_2.2.5)</code> [2]
<code>__stpcpy(GLIBC_2.2.5)</code> <code>__stpcpy(GLIBC_2.2.5)</code> [1]	<code>index(GLIBC_2.2.5)</code> <code>index(GLIBC_2.2.5)</code> [2]	<code>strchr(GLIBC_2.2.5)</code> <code>strchr(GLIBC_2.2.5)</code> [2]	<code>strncmp(GLIBC_2.2.5)</code> <code>strncmp(GLIBC_2.2.5)</code> [2]	<code>strtok_r(GLIBC_2.2.5)</code> <code>strtok_r(GLIBC_2.2.5)</code> [42]
<code>__strdup(GLIBC_2.2.5)</code> <code>__strdup(GLIBC_2.2.5)</code> [1]	<code>memccpy(GLIBC_2.2.5)</code> <code>memccpy(GLIBC_2.2.5)</code> [2]	<code>strecmp(GLIBC_2.2.5)</code> <code>strecmp(GLIBC_2.2.5)</code> [2]	<code>strncpy(GLIBC_2.2.5)</code> <code>strncpy(GLIBC_2.2.5)</code> [2]	<code>strtol(GLIBC_2.2.5)</code> <code>strtol(GLIBC_2.2.5)</code> [2]

C_2.2.5) [1]	BC_2.2.5) [2]	2.5) [2]	2.2.5) [2]	2.5) [2]
<code>__strtod_internal(GLIBC_2.2.5)</code> <code>__strtod_internal(GLIBC_2.2.5)</code> [1]	<code>memchr(GLIBC_2.2.5)</code> <code>memchr(GLIBC_2.2.5)</code> [2]	<code>streq(GLIBC_2.2.5)</code> <code>streq(GLIBC_2.2.5)</code> [2]	<code>strndup(GLIBC_2.2.5)</code> <code>strndup(GLIBC_2.2.5)</code> [1]	<code>strtoll(GLIBC_2.2.5)</code> <code>strtoll(GLIBC_2.2.5)</code> [2]
<code>__strtof_internal(GLIBC_2.2.5)</code> <code>__strtof_internal(GLIBC_2.2.5)</code> [1]	<code>memcmp(GLIBC_2.2.5)</code> <code>memcmp(GLIBC_2.2.5)</code> [2]	<code>streq(GLIBC_2.2.5)</code> <code>streq(GLIBC_2.2.5)</code> [2]	<code>strlen(GLIBC_2.2.5)</code> <code>strlen(GLIBC_2.2.5)</code> [1]	<code>strtoq(GLIBC_2.2.5)</code> <code>strtoq(GLIBC_2.2.5)</code> [1]
<code>__strtok_r(GLIBC_2.2.5)</code> <code>__strtok_r(GLIBC_2.2.5)</code> [1]	<code>memcpy(GLIBC_2.2.5)</code> <code>memcpy(GLIBC_2.2.5)</code> [2]	<code>strncpy(GLIBC_2.2.5)</code> <code>strncpy(GLIBC_2.2.5)</code> [2]	<code>strpbrk(GLIBC_2.2.5)</code> <code>strpbrk(GLIBC_2.2.5)</code> [2]	<code>strtoull(GLIBC_2.2.5)</code> <code>strtoull(GLIBC_2.2.5)</code> [2]
<code>__strtol_internal(GLIBC_2.2.5)</code> <code>__strtol_internal(GLIBC_2.2.5)</code> [1]	<code>memmove(GLIBC_2.2.5)</code> <code>memmove(GLIBC_2.2.5)</code> [2]	<code>strdup(GLIBC_2.2.5)</code> <code>strdup(GLIBC_2.2.5)</code> [2]	<code>strptime(GLIBC_2.2.5)</code> <code>strptime(GLIBC_2.2.5)</code> [1]	<code>strtoumax(GLIBC_2.2.5)</code> <code>strtoumax(GLIBC_2.2.5)</code> [2]
<code>__strtold_internal(GLIBC_2.2.5)</code> <code>__strtold_internal(GLIBC_2.2.5)</code> [1]	<code>memrchr(GLIBC_2.2.5)</code> <code>memrchr(GLIBC_2.2.5)</code> [1]	<code>strerror(GLIBC_2.2.5)</code> <code>strerror(GLIBC_2.2.5)</code> [2]	<code>strchr(GLIBC_2.2.5)</code> <code>strchr(GLIBC_2.2.5)</code> [2]	<code>strtouq(GLIBC_2.2.5)</code> <code>strtouq(GLIBC_2.2.5)</code> [1]
<code>__strtoll_internal(GLIBC_2.2.5)</code> <code>__strtoll_internal(GLIBC_2.2.5)</code> [1]	<code>memset(GLIBC_2.2.5)</code> <code>memset(GLIBC_2.2.5)</code> [2]	<code>strerror_r(GLIBC_2.2.5)</code> <code>strerror_r(GLIBC_2.2.5)</code> [1]	<code>strsep(GLIBC_2.2.5)</code> <code>strsep(GLIBC_2.2.5)</code> [1]	<code>strverscmp(GLIBC_2.2.5)</code> <code>strverscmp(GLIBC_2.2.5)</code> [1]
<code>__strtoul_internal(GLIBC_2.2.5)</code> <code>__strtoul_internal(GLIBC_2.2.5)</code> [1]	<code>rindex(GLIBC_2.2.5)</code> <code>rindex(GLIBC_2.2.5)</code> [2]	<code>strfmon(GLIBC_2.2.5)</code> <code>strfmon(GLIBC_2.2.5)</code> [2]	<code>strsignal(GLIBC_2.2.5)</code> <code>strsignal(GLIBC_2.2.5)</code> [1]	<code>strxfrm(GLIBC_2.2.5)</code> <code>strxfrm(GLIBC_2.2.5)</code> [2]
<code>__strtoull_internal(GLIBC_2.2.5)</code> <code>__strtoull_internal(GLIBC_2.2.5)</code> [1]	<code>stpncpy(GLIBC_2.2.5)</code> <code>stpncpy(GLIBC_2.2.5)</code> [1]	<code>strfry(GLIBC_2.2.5)</code> <code>strfry(GLIBC_2.2.5)</code> [1]	<code>strspn(GLIBC_2.2.5)</code> <code>strspn(GLIBC_2.2.5)</code> [2]	<code>swab(GLIBC_2.2.5)</code> <code>swab(GLIBC_2.2.5)</code> [2]
<code>bcmp(GLIBC_2.2.5)</code> <code>bcmp(GLIBC_2.2.5)</code> [2]	<code>stpncpy(GLIBC_2.2.5)</code> <code>stpncpy(GLIBC_2.2.5)</code> [1]	<code>strftime(GLIBC_2.2.5)</code> <code>strftime(GLIBC_2.2.5)</code> [2]	<code>strstr(GLIBC_2.2.5)</code> <code>strstr(GLIBC_2.2.5)</code> [2]	
<code>bcopy(GLIBC_2.2.5)</code> <code>bcopy(GLIBC_2.2.5)</code> [2]	<code>strcasestr(GLIBC_2.2.5)</code> <code>strcasestr(GLIBC_2.2.5)</code> [2]	<code>strlen(GLIBC_2.2.5)</code> <code>strlen(GLIBC_2.2.5)</code> [2]	<code>strtof(GLIBC_2.2.5)</code> <code>strtof(GLIBC_2.2.5)</code> [2]	

112

113 *Referenced Specification(s)*

114 [1]. Linux Standard Base this specification

115 [2]. ISO/IEC 9945: POSIX (2003-Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
116 V3)

1.2.9. IPC Functions

1.2.9.1. Interfaces for IPC Functions

117 An LSB conforming implementation shall provide the architecture specific functions for IPC Functions specified in
118 Table 1-14, with the full functionality as described in the referenced underlying specification.
119

120 **Table 1-14. libc - IPC Functions Function Interfaces**

121	ftok (GLIBC_2.2.5)ftok(GLIBC_2.2.5) [1]	msgrev (GLIBC_2.2.5)msgrcv(GLIBC_2.2.5) [1]	semget (GLIBC_2.2.5)semget(GLIBC_2.2.5) [1]	shmetl (GLIBC_2.2.5)shmctl(GLIBC_2.2.5) [1]	
	msgget (GLIBC_2.2.5)msgctl(GLIBC_2.2.5) [1]	msgsnd (GLIBC_2.2.5)msgsnd(GLIBC_2.2.5) [1]	semop (GLIBC_2.2.5)semop(GLIBC_2.2.5) [1]	shmdt (GLIBC_2.2.5)shmdt(GLIBC_2.2.5) [1]	
	msgget (GLIBC_2.2.5)msgget(GLIBC_2.2.5) [1]	semctl (GLIBC_2.2.5)semctl(GLIBC_2.2.5) [1]	shmat (GLIBC_2.2.5)shmat(GLIBC_2.2.5) [1]	shmget (GLIBC_2.2.5)shmget(GLIBC_2.2.5) [1]	

122 *Referenced Specification(s)*

123 [1]. ISO/IEC 9945: POSIX (2003-Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
124 V3)

1.2.10. Regular Expressions

1.2.10.1. Interfaces for Regular Expressions

126 An LSB conforming implementation shall provide the architecture specific functions for Regular Expressions
127 specified in Table 1-15, with the full functionality as described in the referenced underlying specification.

128 **Table 1-15. libc - Regular Expressions Function Interfaces**

129	regcomp (GLIBC_2.2.5)regcomp(GLIBC_2.2.5) [1]	regerror (GLIBC_2.2.5)regerror(GLIBC_2.2.5) [1]	regexexec (GLIBC_2.2.5)regexexec(GLIBC_2.2.5) [1]	regfree (GLIBC_2.2.5)regfree(GLIBC_2.2.5) [1]	
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130 *Referenced Specification(s)*

131 [1]. ISO/IEC 9945: POSIX (2003-Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
132 V3)

133 An LSB conforming implementation shall provide the architecture specific deprecated functions for Regular
134 Expressions specified in Table 1-16, with the full functionality as described in the referenced underlying specification.

135 These interfaces are deprecated, and applications should avoid using them. These interfaces may be withdrawn
136 in future releases of this specification.

137 **Table 1-16. libc - Regular Expressions Deprecated Function Interfaces**

advance (GLIBC_2.2.5)advance(GLIBC_2.2.5) [1]	re_comp (GLIBC_2.2.5)re_comp(GLIBC_2.2.5) [1]	re_exec (GLIBC_2.2.5)re_exec(GLIBC_2.2.5) [1]	step (GLIBC_2.2.5)step(GLIBC_2.2.5) [1]	
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138
139 *Referenced Specification(s)*140 [1]. CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0,
141 ~~€606~~)SUSv2142 An LSB conforming implementation shall provide the architecture specific deprecated data interfaces for Regular
143 Expressions specified in Table 1-17, with the full functionality as described in the referenced underlying specification.144 These interfaces are deprecated, and applications should avoid using them. These interfaces may be withdrawn
145 in future releases of this specification.146 **Table 1-17. libc - Regular Expressions Deprecated Data Interfaces**

loc1 (GLIBC_2.2.5)loc1(GLIBC_2.2.5) [1]	loc2 (GLIBC_2.2.5)loc2(GLIBC_2.2.5) [1]	locs (GLIBC_2.2.5)locs(GLIBC_2.2.5) [1]		
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147
148 *Referenced Specification(s)*149 [1]. CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0,
150 ~~€606~~)SUSv2

1.2.11. Character Type Functions

1.2.11.1. Interfaces for Character Type Functions

151 An LSB conforming implementation shall provide the architecture specific functions for Character Type Functions
152 specified in Table 1-18, with the full functionality as described in the referenced underlying specification.
153154 **Table 1-18. libc - Character Type Functions Function Interfaces**

__ctype_get_mb_cur_max (GLIBC_2.2.5)__ctype_get_mb_cur_max(GLIBC_2.2.5) [1]	isdigit (GLIBC_2.2.5)isdigit(GLIBC_2.2.5) [2]	iswalnum (GLIBC_2.2.5)iswalnum(GLIBC_2.2.5) [2]	iswlower (GLIBC_2.2.5)iswlower(GLIBC_2.2.5) [2]	toascii (GLIBC_2.2.5)toascii(GLIBC_2.2.5) [2]
_tolower (GLIBC_2.2.5)_tolower(GLIBC_2.2.5) [2]	isgraph (GLIBC_2.2.5)isgraph(GLIBC_2.2.5) [2]	iswalpha (GLIBC_2.2.5)iswalpha(GLIBC_2.2.5) [2]	iswprint (GLIBC_2.2.5)iswprint(GLIBC_2.2.5) [2]	tolower (GLIBC_2.2.5)tolower(GLIBC_2.2.5) [2]
_toupper (GLIBC_2.2.5)_toupper(GLIBC_2.2.5) [2]	islower (GLIBC_2.2.5)islower(GLIBC_2.2.5) [2]	iswblank (GLIBC_2.2.5)iswblank(GLIBC_2.2.5) [2]	iswpunct (GLIBC_2.2.5)iswpunct(GLIBC_2.2.5) [2]	toupper (GLIBC_2.2.5)toupper(GLIBC_2.2.5) [2]
isalnum (GLIBC_2.2.5)isalnum(GLIBC_2.2.5) [2]	isprint (GLIBC_2.2.5)isprint(GLIBC_2.2.5) [2]	iswcntrl (GLIBC_2.2.5)iswcntrl(GLIBC_2.2.5) [2]	iswspace (GLIBC_2.2.5)iswspace(GLIBC_2.2.5) [2]	

2.2.5) [2]	2.5) [2]	_2.2.5) [2]	C_2.2.5) [2]	
isalpha(GLIBC_2.2.5)isalpha(GLIBC_2.2.5) [2]	ispunct(GLIBC_2.2.5)ispunct(GLIBC_2.2.5) [2]	iswctype(GLIBC_2.2.5)iswctype(GLIBC_2.2.5) [4]2]	iswupper(GLIBC_2.2.5)iswupper(GLIBC_2.2.5) [2]	
isascii(GLIBC_2.2.5)isascii(GLIBC_2.2.5) [2]	isspace(GLIBC_2.2.5)isspace(GLIBC_2.2.5) [2]	iswdigit(GLIBC_2.2.5)iswdigit(GLIBC_2.2.5) [2]	iswxdigit(GLIBC_2.2.5)iswxdigit(GLIBC_2.2.5) [2]	
isctrl(GLIBC_2.2.5)isctrl(GLIBC_2.2.5) [2]	isupper(GLIBC_2.2.5)isupper(GLIBC_2.2.5) [2]	iswgraph(GLIBC_2.2.5)iswgraph(GLIBC_2.2.5) [2]	isxdigit(GLIBC_2.2.5)isxdigit(GLIBC_2.2.5) [2]	

155

156 *Referenced Specification(s)*157 [1]. ~~Linux Standard Base~~this specification158 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)~~159 ~~V3)~~

1.2.12. Time Manipulation

1.2.12.1. Interfaces for Time Manipulation

161 An LSB conforming implementation shall provide the architecture specific functions for Time Manipulation specified
162 in Table 1-19, with the full functionality as described in the referenced underlying specification.

163 **Table 1-19. libc - Time Manipulation Function Interfaces**

adjtime(GLIBC_2.2.5)adjtime(GLIBC_2.2.5) [1]	etime(GLIBC_2.2.5)etime(GLIBC_2.2.5) [2]	gmtime(GLIBC_2.2.5)gmtime(GLIBC_2.2.5) [2]	localtime_r(GLIBC_2.2.5)localtime_r(GLIBC_2.2.5) [2]	ualarm(GLIBC_2.2.5)ualarm(GLIBC_2.2.5) [2]
asctime(GLIBC_2.2.5)asctime(GLIBC_2.2.5) [2]	etime_r(GLIBC_2.2.5)etime_r(GLIBC_2.2.5) [2]	gmtime_r(GLIBC_2.2.5)gmtime_r(GLIBC_2.2.5) [2]	mktime(GLIBC_2.2.5)mktime(GLIBC_2.2.5) [2]	
asctime_r(GLIBC_2.2.5)asctime_r(GLIBC_2.2.5) [2]	difftime(GLIBC_2.2.5)difftime(GLIBC_2.2.5) [2]	localtime(GLIBC_2.2.5)localtime(GLIBC_2.2.5) [2]	tzset(GLIBC_2.2.5)tzset(GLIBC_2.2.5) [2]	

164

165 *Referenced Specification(s)*166 [1]. ~~Linux Standard Base~~this specification167 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)~~168 ~~V3)~~

169 An LSB conforming implementation shall provide the architecture specific deprecated functions for Time
170 Manipulation specified in Table 1-20, with the full functionality as described in the referenced underlying
171 specification.

172 These interfaces are deprecated, and applications should avoid using them. These interfaces may be withdrawn
 173 in future releases of this specification.

174 **Table 1-20. libc - Time Manipulation Deprecated Function Interfaces**

adjtime(GLIBC_2.2.5) [1]				
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176 *Referenced Specification(s)*

177 [1]. ~~Linux Standard Base~~this specification

178 An LSB conforming implementation shall provide the architecture specific data interfaces for Time Manipulation
 179 specified in Table 1-21, with the full functionality as described in the referenced underlying specification.

180 **Table 1-21. libc - Time Manipulation Data Interfaces**

__daylight (GLIBC_2.2.5) [1]	__tzname (GLIBC_2.2.5) [1]	timezone(GLIBC_2.2.5) [2]		
__timezone (GLIBC_2.2.5) [1]	daylight(GLIBC_2.2.5) [2]	tzname(GLIBC_2.2.5) [2]		

182 *Referenced Specification(s)*

183 [1]. ~~Linux Standard Base~~this specification

184 [2]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
 185 V3)

1.2.13. Terminal Interface Functions

1.2.13.1. Interfaces for Terminal Interface Functions

187 An LSB conforming implementation shall provide the architecture specific functions for Terminal Interface Functions
 188 specified in Table 1-22, with the full functionality as described in the referenced underlying specification.

189 **Table 1-22. libc - Terminal Interface Functions Function Interfaces**

efgetispeed(GLIBC_2.2.5) [1]	efsetispeed(GLIBC_2.2.5) [1]	tedrain(GLIBC_2.2.5) [1]	tegetattr(GLIBC_2.2.5) [1]	tesendbreak(GLIBC_2.2.5) [1]
efgetospeed(GLIBC_2.2.5) [1]	efsetospeed(GLIBC_2.2.5) [1]	teflow(GLIBC_2.2.5) [1]	tegetpgrp(GLIBC_2.2.5) [1]	tesetattr(GLIBC_2.2.5) [1]
efmakeraw(GLIBC_2.2.5) [2]	efsetspeed(GLIBC_2.2.5) [2]	teflush(GLIBC_2.2.5) [1]	tegetsid(GLIBC_2.2.5) [1]	tesetpgrp(GLIBC_2.2.5) [1]

190

191 *Referenced Specification(s)*192 [1]. ISO/IEC 9945: POSIX (2003-Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
193 V3)

194 [2]. Linux Standard Basethis specification

1.2.14. System Database Interface

1.2.14.1. Interfaces for System Database Interface

195 An LSB conforming implementation shall provide the architecture specific functions for System Database Interface
196 specified in Table 1-23, with the full functionality as described in the referenced underlying specification.
197

198 **Table 1-23. libc - System Database Interface Function Interfaces**

endgrent(GLIBC_2.2.5)endgrent(GLIBC_2.2.5) [1]	getgrgid(GLIBC_2.2.5)getgrgid(GLIBC_2.2.5) [1]	getprotobynumber(GLIBC_2.2.5)getprotobynumber(GLIBC_2.2.5) [1]	getservbyport(GLIBC_2.2.5)getservbyport(GLIBC_2.2.5) [1]	setgrent(GLIBC_2.2.5)setgrent(GLIBC_2.2.5) [1]
endnetent(GLIBC_2.2.5)endnetent(GLIBC_2.2.5) [1]	getgrgid_r(GLIBC_2.2.5)getgrgid_r(GLIBC_2.2.5) [1]	getprotoent(GLIBC_2.2.5)getprotoent(GLIBC_2.2.5) [1]	getservent(GLIBC_2.2.5)getservent(GLIBC_2.2.5) [1]	setgroups(GLIBC_2.2.5)setgroups(GLIBC_2.2.5) [2]
endprotoent(GLIBC_2.2.5)endprotoent(GLIBC_2.2.5) [1]	getgrnam(GLIBC_2.2.5)getgrnam(GLIBC_2.2.5) [1]	getpwent(GLIBC_2.2.5)getpwent(GLIBC_2.2.5) [1]	getutent(GLIBC_2.2.5)getutent(GLIBC_2.2.5) [2]	setnetent(GLIBC_2.2.5)setnetent(GLIBC_2.2.5) [1]
endpwent(GLIBC_2.2.5)endpwent(GLIBC_2.2.5) [1]	getgrnam_r(GLIBC_2.2.5)getgrnam_r(GLIBC_2.2.5) [1]	getpwnam(GLIBC_2.2.5)getpwnam(GLIBC_2.2.5) [1]	getutent_r(GLIBC_2.2.5)getutent_r(GLIBC_2.2.5) [2]	setprotoent(GLIBC_2.2.5)setprotoent(GLIBC_2.2.5) [1]
endservent(GLIBC_2.2.5)endservent(GLIBC_2.2.5) [1]	gethostbyaddr(GLIBC_2.2.5)gethostbyaddr(GLIBC_2.2.5) [1]	getpwnam_r(GLIBC_2.2.5)getpwnam_r(GLIBC_2.2.5) [1]	getutxent(GLIBC_2.2.5)getutxent(GLIBC_2.2.5) [1]	setpwent(GLIBC_2.2.5)setpwent(GLIBC_2.2.5) [1]
endutent(GLIBC_2.2.5)endutent(GLIBC_2.2.5) [3]	gethostbyname(GLIBC_2.2.5)gethostbyname(GLIBC_2.2.5) [1]	getpwuid(GLIBC_2.2.5)getpwuid(GLIBC_2.2.5) [1]	getutxid(GLIBC_2.2.5)getutxid(GLIBC_2.2.5) [1]	setservent(GLIBC_2.2.5)setservent(GLIBC_2.2.5) [1]
endutxent(GLIBC_2.2.5)endutxent(GLIBC_2.2.5) [1]	getnetbyaddr(GLIBC_2.2.5)getnetbyaddr(GLIBC_2.2.5) [1]	getpwuid_r(GLIBC_2.2.5)getpwuid_r(GLIBC_2.2.5) [1]	getutxline(GLIBC_2.2.5)getutxline(GLIBC_2.2.5) [1]	setutent(GLIBC_2.2.5)setutent(GLIBC_2.2.5) [2]
getgrent(GLIBC_2.2.5)getgrent(GLIBC_2.2.5) [1]	getprotobyname(GLIBC_2.2.5)getprotobyname(GLIBC_2.2.5) [1]	getservbyname(GLIBC_2.2.5)getservbyname(GLIBC_2.2.5) [1]	pututxline(GLIBC_2.2.5)pututxline(GLIBC_2.2.5) [1]	setutxent(GLIBC_2.2.5)setutxent(GLIBC_2.2.5) [1]

199

200 *Referenced Specification(s)*

201 [1]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
202 V3)

203 [2]. Linux Standard Base this specification

204 [3]. CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1-85912-181-0,
205 C606) SUSv2

1.2.15. Language Support

1.2.15.1. Interfaces for Language Support

207 An LSB conforming implementation shall provide the architecture specific functions for Language Support specified
208 in Table 1-24, with the full functionality as described in the referenced underlying specification.

209 **Table 1-24. libc - Language Support Function Interfaces**

210	<code>__libe_start_main(GLIBC_2.2.5) __lib c_start_main(GLIB C_2.2.5) [1]</code>	<code>__obstack_begin(GL IBC_2.2.5) __obstack _begin(GLIBC_2.2. 5) [1]</code>	<code>__obstack_newchunk (GLIBC_2.2.5) __obs tack_newchunk(GL IBC_2.2.5) [1]</code>	<code>obstack_free(GLIB C_2.2.5) obstack_fre e(GLIBC_2.2.5) [1]</code>	
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211 *Referenced Specification(s)*

212 [1]. Linux Standard Base this specification

1.2.16. Large File Support

1.2.16.1. Interfaces for Large File Support

214 An LSB conforming implementation shall provide the architecture specific functions for Large File Support specified
215 in Table 1-25, with the full functionality as described in the referenced underlying specification.

216 **Table 1-25. libc - Large File Support Function Interfaces**

<code>__fxstat64(GLIBC_ 2.2.5) __fxstat64(GL IBC_2.2.5) [1]</code>	<code>fopen64(GLIBC_2. 2.5) fopen64(GLIB C_2.2.5) [2]</code>	<code>ftello64(GLIBC_2.2 .5) ftello64(GLIB C_2.2.5) [2]</code>	<code>lseek64(GLIBC_2.2 .5) lseek64(GLIB C_2.2.5) [2]</code>	<code>readdir64(GLIBC_2. 2.5) readdir64(GLI BC_2.2.5) [2]</code>
<code>__lxstat64(GLIBC_ 2.2.5) __lxstat64(GL IBC_2.2.5) [1]</code>	<code>freopen64(GLIBC_ 2.2.5) freopen64(GL IBC_2.2.5) [2]</code>	<code>ftruncate64(GLIB C_2.2.5) ftruncate64(GLIBC_2.2.5) [2]</code>	<code>mkstemp64(GLIB C_2.2.5) mkstemp64(GLIBC_2.2.5) [2]</code>	<code>statvfs64(GLIBC_2. 2.5) statvfs64(GLIB C_2.2.5) [2]</code>
<code>__xstat64(GLIBC_ 2.2.5) __xstat64(GLI BC_2.2.5) [1]</code>	<code>fseeko64(GLIBC_2. 2.5) fseeko64(GLIB C_2.2.5) [2]</code>	<code>ftw64(GLIBC_2.2.5) ftw64(GLIBC_2.2. 5) [2]</code>	<code>mmap64(GLIBC_2. 2.5) mmap64(GLIB C_2.2.5) [2]</code>	<code>tmpfile64(GLIBC_2. 2.5) tmpfile64(GLI BC_2.2.5) [2]</code>
<code>creat64(GLIBC_2.2 .5) creat64(GLIB C_2.2.5) [2]</code>	<code>fsetpos64(GLIBC_2. 2.5) fsetpos64(GLI BC_2.2.5) [2]</code>	<code>getrlimit64(GLIB C_2.2.5) getrlimit64(GLIBC_2.2.5) [2]</code>	<code>nftw64(GLIBC_2.3. 3) nftw64(GLIB C_2.2.5) [2]</code>	<code>truncate64(GLIB C_2.2.5) truncate64(GL IBC_2.2.5) [2]</code>

217	<code>fgetpos64(GLIBC_2.2.5)</code> <code>fgetpos64(GLIBC_2.2.5) [2]</code>	<code>fstatvfs64(GLIBC_2.2.5)</code> <code>fstatvfs64(GLIBC_2.2.5) [2]</code>	<code>lockf64(GLIBC_2.2.5)</code> <code>lockf64(GLIBC_2.2.5) [2]</code>	<code>open64(GLIBC_2.2.5)</code> <code>open64(GLIBC_2.2.5) [2]</code>	
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218 *Referenced Specification(s)*

219 [1]. ~~Linux Standard Base~~this specification

220 [2]. Large File Support

1.2.17. Standard Library

1.2.17.1. Interfaces for Standard Library

221 An LSB conforming implementation shall provide the architecture specific functions for Standard Library specified in
222 Table 1-26, with the full functionality as described in the referenced underlying specification.
223

224 **Table 1-26. libc - Standard Library Function Interfaces**

<code>_Exit(GLIBC_2.2.5)</code> <code>_Exit(GLIBC_2.2.5) [1]</code>	<code>dirname(GLIBC_2.2.5)</code> <code>dirname(GLIBC_2.2.5) [1]</code>	<code>glob(GLIBC_2.2.5)</code> <code>glob(GLIBC_2.2.5) [1]</code>	<code>lsearch(GLIBC_2.2.5)</code> <code>lsearch(GLIBC_2.2.5) [1]</code>	<code>srand(GLIBC_2.2.5)</code> <code>srand(GLIBC_2.2.5) [1]</code>
<code>__assert_fail(GLIBC_2.2.5)</code> <code>__assert_fail(GLIBC_2.2.5) [2]</code>	<code>div(GLIBC_2.2.5)</code> <code>div(GLIBC_2.2.5) [1]</code>	<code>glob64(GLIBC_2.2.5)</code> <code>glob64(GLIBC_2.2.5) [2]</code>	<code>makecontext(GLIBC_2.2.5)</code> <code>makecontext(GLIBC_2.2.5) [1]</code>	<code>srand48(GLIBC_2.2.5)</code> <code>srand48(GLIBC_2.2.5) [1]</code>
<code>__cxa_atexit(GLIBC_2.2.5)</code> <code>__cxa_atexit(GLIBC_2.2.5) [2]</code>	<code>drand48(GLIBC_2.2.5)</code> <code>drand48(GLIBC_2.2.5) [1]</code>	<code>globfree(GLIBC_2.2.5)</code> <code>globfree(GLIBC_2.2.5) [1]</code>	<code>malloc(GLIBC_2.2.5)</code> <code>malloc(GLIBC_2.2.5) [1]</code>	<code>srandom(GLIBC_2.2.5)</code> <code>srandom(GLIBC_2.2.5) [1]</code>
<code>__errno_location(GLIBC_2.2.5)</code> <code>__errno_location(GLIBC_2.2.5) [2]</code>	<code>ecvt(GLIBC_2.2.5)</code> <code>ecvt(GLIBC_2.2.5) [1]</code>	<code>globfree64(GLIBC_2.2.5)</code> <code>globfree64(GLIBC_2.2.5) [2]</code>	<code>memmem(GLIBC_2.2.5)</code> <code>memmem(GLIBC_2.2.5) [2]</code>	<code>strtod(GLIBC_2.2.5)</code> <code>strtod(GLIBC_2.2.5) [1]</code>
<code>__fpending(GLIBC_2.2.5)</code> <code>__fpending(GLIBC_2.2.5) [2]</code>	<code>erand48(GLIBC_2.2.5)</code> <code>erand48(GLIBC_2.2.5) [1]</code>	<code>grantpt(GLIBC_2.2.5)</code> <code>grantpt(GLIBC_2.2.5) [1]</code>	<code>mkstemp(GLIBC_2.2.5)</code> <code>mkstemp(GLIBC_2.2.5) [1]</code>	<code>strtol(GLIBC_2.2.5)</code> <code>strtol(GLIBC_2.2.5) [1]</code>
<code>__getpagesize(GLIBC_2.2.5)</code> <code>__getpagesize(GLIBC_2.2.5) [2]</code>	<code>err(GLIBC_2.2.5)</code> <code>err(GLIBC_2.2.5) [2]</code>	<code>hcreate(GLIBC_2.2.5)</code> <code>hcreate(GLIBC_2.2.5) [1]</code>	<code>mktemp(GLIBC_2.2.5)</code> <code>mktemp(GLIBC_2.2.5) [1]</code>	<code>strtoul(GLIBC_2.2.5)</code> <code>strtoul(GLIBC_2.2.5) [1]</code>
<code>__isinf(GLIBC_2.2.5)</code> <code>__isinf(GLIBC_2.2.5) [2]</code>	<code>error(GLIBC_2.2.5)</code> <code>error(GLIBC_2.2.5) [2]</code>	<code>hdestroy(GLIBC_2.2.5)</code> <code>hdestroy(GLIBC_2.2.5) [1]</code>	<code>mrnd48(GLIBC_2.2.5)</code> <code>mrnd48(GLIBC_2.2.5) [1]</code>	<code>swapecontext(GLIBC_2.2.5)</code> <code>swapecontext(GLIBC_2.2.5) [1]</code>
<code>__isnff(GLIBC_2.2.5)</code> <code>__isnff(GLIBC_2.2.5) [2]</code>	<code>errx(GLIBC_2.2.5)</code> <code>errx(GLIBC_2.2.5) [2]</code>	<code>hsearch(GLIBC_2.2.5)</code> <code>hsearch(GLIBC_2.2.5) [1]</code>	<code>nftw(GLIBC_2.3.3)</code> <code>nftw(GLIBC_2.3.3) [1]</code>	<code>syslog(GLIBC_2.2.5)</code> <code>syslog(GLIBC_2.2.5) [1]</code>

2.2.5) [2]	[2]	2.2.5) [1]	[1]	2.5) [1]
__isinf(GLIBC_2.2.5) __isinf(GLIBC_2.2.5) [2]	fevt(GLIBC_2.2.5) fcvt(GLIBC_2.2.5) [1]	htonl(GLIBC_2.2.5) htonl(GLIBC_2.2.5) [1]	nrnd48(GLIBC_2.2.5) nrnd48(GLIBC_2.2.5) [1]	system(GLIBC_2.2.5) system(GLIBC_2.2.5) [2]
__isnan(GLIBC_2.2.5) __isnan(GLIBC_2.2.5) [2]	fntmsg(GLIBC_2.2.5) fntmsg(GLIBC_2.2.5) [1]	htons(GLIBC_2.2.5) htons(GLIBC_2.2.5) [1]	ntohl(GLIBC_2.2.5) ntohl(GLIBC_2.2.5) [1]	tdelete(GLIBC_2.2.5) tdelete(GLIBC_2.2.5) [1]
__isnanf(GLIBC_2.2.5) __isnanf(GLIBC_2.2.5) [2]	fnmatch(GLIBC_2.2.5) fnmatch(GLIBC_2.2.5) [1]	imaxabs(GLIBC_2.2.5) imaxabs(GLIBC_2.2.5) [1]	ntohs(GLIBC_2.2.5) ntohs(GLIBC_2.2.5) [1]	tfind(GLIBC_2.2.5) tfind(GLIBC_2.2.5) [1]
__isnanl(GLIBC_2.2.5) __isnanl(GLIBC_2.2.5) [2]	fpathconf(GLIBC_2.2.5) fpathconf(GLIBC_2.2.5) [1]	imaxdiv(GLIBC_2.2.5) imaxdiv(GLIBC_2.2.5) [1]	openlog(GLIBC_2.2.5) openlog(GLIBC_2.2.5) [1]	tmpfile(GLIBC_2.2.5) tmpfile(GLIBC_2.2.5) [1]
__sysconf(GLIBC_2.2.5) __sysconf(GLIBC_2.2.5) [2]	free(GLIBC_2.2.5) free(GLIBC_2.2.5) [1]	inet_addr(GLIBC_2.2.5) inet_addr(GLIBC_2.2.5) [1]	perror(GLIBC_2.2.5) perror(GLIBC_2.2.5) [1]	tmpnam(GLIBC_2.2.5) tmpnam(GLIBC_2.2.5) [1]
_exit(GLIBC_2.2.5) _exit(GLIBC_2.2.5) [1]	freeaddrinfo(GLIBC_2.2.5) freeaddrinfo(GLIBC_2.2.5) [1]	inet_ntoa(GLIBC_2.2.5) inet_ntoa(GLIBC_2.2.5) [1]	posix_memalign(GLIBC_2.2.5) posix_memalign(GLIBC_2.2.5) [1]	tsearch(GLIBC_2.2.5) tsearch(GLIBC_2.2.5) [1]
_longjmp(GLIBC_2.2.5) _longjmp(GLIBC_2.2.5) [1]	ftrylockfile(GLIBC_2.2.5) ftrylockfile(GLIBC_2.2.5) [1]	inet_ntop(GLIBC_2.2.5) inet_ntop(GLIBC_2.2.5) [1]	ptsname(GLIBC_2.2.5) ptsname(GLIBC_2.2.5) [1]	ttname(GLIBC_2.2.5) ttname(GLIBC_2.2.5) [1]
_setjmp(GLIBC_2.2.5) _setjmp(GLIBC_2.2.5) [1]	ftw(GLIBC_2.2.5) ftw(GLIBC_2.2.5) [1]	inet_pton(GLIBC_2.2.5) inet_pton(GLIBC_2.2.5) [1]	putenv(GLIBC_2.2.5) putenv(GLIBC_2.2.5) [1]	ttname_r(GLIBC_2.2.5) ttname_r(GLIBC_2.2.5) [1]
a64l(GLIBC_2.2.5) a64l(GLIBC_2.2.5) [1]	funlockfile(GLIBC_2.2.5) funlockfile(GLIBC_2.2.5) [1]	initstate(GLIBC_2.2.5) initstate(GLIBC_2.2.5) [1]	qsort(GLIBC_2.2.5) qsort(GLIBC_2.2.5) [1]	twalk(GLIBC_2.2.5) twalk(GLIBC_2.2.5) [1]
abort(GLIBC_2.2.5) abort(GLIBC_2.2.5) [1]	gai_strerror(GLIBC_2.2.5) gai_strerror(GLIBC_2.2.5) [1]	insque(GLIBC_2.2.5) insque(GLIBC_2.2.5) [1]	rand(GLIBC_2.2.5) rand(GLIBC_2.2.5) [1]	unlockpt(GLIBC_2.2.5) unlockpt(GLIBC_2.2.5) [1]
abs(GLIBC_2.2.5) abs(GLIBC_2.2.5) [1]	gevt(GLIBC_2.2.5) gcvt(GLIBC_2.2.5) [1]	isatty(GLIBC_2.2.5) isatty(GLIBC_2.2.5) [1]	rand_r(GLIBC_2.2.5) rand_r(GLIBC_2.2.5) [1]	unsetenv(GLIBC_2.2.5) unsetenv(GLIBC_2.2.5) [1]
atof(GLIBC_2.2.5) atof(GLIBC_2.2.5) [1]	getaddrinfo(GLIBC_2.2.5) getaddrinfo(GLIBC_2.2.5) [1]	isblank(GLIBC_2.2.5) isblank(GLIBC_2.2.5) [1]	random(GLIBC_2.2.5) random(GLIBC_2.2.5) [1]	usleep(GLIBC_2.2.5) usleep(GLIBC_2.2.5) [1]
atoi(GLIBC_2.2.5) atoi(GLIBC_2.2.5) [1]	getcwd(GLIBC_2.2.5) getcwd(GLIBC_2.2.5) [1]	jrand48(GLIBC_2.2.5) jrand48(GLIBC_2.2.5) [1]	random_r(GLIBC_2.2.5) random_r(GLIBC_2.2.5) [1]	verrx(GLIBC_2.2.5) verrx(GLIBC_2.2.5) [1]

[1]	.2.5) [1]	2.2.5) [1]	BC_2.2.5) [2]	5) [2]
atol(GLIBC_2.2.5)atol(GLIBC_2.2.5) [1]	getdate(GLIBC_2.2.5)getdate(GLIBC_2.2.5) [1]	l64a(GLIBC_2.2.5)l64a(GLIBC_2.2.5) [1]	realloc(GLIBC_2.2.5)realloc(GLIBC_2.2.5) [1]	vfscanf(GLIBC_2.2.5)vfscanf(GLIBC_2.2.5) [1]
atoll(GLIBC_2.2.5)atoll(GLIBC_2.2.5) [1]	getenv(GLIBC_2.2.5)getenv(GLIBC_2.2.5) [1]	labs(GLIBC_2.2.5)labs(GLIBC_2.2.5) [1]	realpath(GLIBC_2.2.3)realpath(GLIBC_2.2.3) [1]	vscanf(GLIBC_2.2.5)vscanf(GLIBC_2.2.5) [1]
basename(GLIBC_2.2.5)basename(GLIBC_2.2.5) [1]	getlogin(GLIBC_2.2.5)getlogin(GLIBC_2.2.5) [1]	leong48(GLIBC_2.2.5)lcong48(GLIBC_2.2.5) [1]	remque(GLIBC_2.2.5)remque(GLIBC_2.2.5) [1]	vsscanf(GLIBC_2.2.5)vsscanf(GLIBC_2.2.5) [1]
bsearch(GLIBC_2.2.5)bsearch(GLIBC_2.2.5) [1]	getnameinfo(GLIBC_2.2.5)getnameinfo(GLIBC_2.2.5) [1]	ldiv(GLIBC_2.2.5)ldiv(GLIBC_2.2.5) [1]	seed48(GLIBC_2.2.5)seed48(GLIBC_2.2.5) [1]	vsyslog(GLIBC_2.2.5)vsyslog(GLIBC_2.2.5) [2]
calloc(GLIBC_2.2.5)calloc(GLIBC_2.2.5) [1]	getopt(GLIBC_2.2.5)getopt(GLIBC_2.2.5) [2]	lfind(GLIBC_2.2.5)lfind(GLIBC_2.2.5) [1]	setenv(GLIBC_2.2.5)setenv(GLIBC_2.2.5) [1]	warn(GLIBC_2.2.5)warn(GLIBC_2.2.5) [2]
closelog(GLIBC_2.2.5)closelog(GLIBC_2.2.5) [1]	getopt_long(GLIBC_2.2.5)getopt_long(GLIBC_2.2.5) [2]	llabs(GLIBC_2.2.5)llabs(GLIBC_2.2.5) [1]	sethostid(GLIBC_2.2.5)sethostid(GLIBC_2.2.5) [2]	warnx(GLIBC_2.2.5)warnx(GLIBC_2.2.5) [2]
confstr(GLIBC_2.2.5)confstr(GLIBC_2.2.5) [1]	getopt_long_only(GLIBC_2.2.5)getopt_long_only(GLIBC_2.2.5) [2]	lldiv(GLIBC_2.2.5)lldiv(GLIBC_2.2.5) [1]	sethostname(GLIBC_2.2.5)sethostname(GLIBC_2.2.5) [2]	wordexp(GLIBC_2.2.5)wordexp(GLIBC_2.2.5) [1]
cuserid(GLIBC_2.2.5)cuserid(GLIBC_2.2.5) [3]	getsubopt(GLIBC_2.2.5)getsubopt(GLIBC_2.2.5) [1]	longjmp(GLIBC_2.2.5)longjmp(GLIBC_2.2.5) [1]	setlogmask(GLIBC_2.2.5)setlogmask(GLIBC_2.2.5) [1]	wordfree(GLIBC_2.2.5)wordfree(GLIBC_2.2.5) [1]
daemon(GLIBC_2.2.5)daemon(GLIBC_2.2.5) [2]	gettimeofday(GLIBC_2.2.5)gettimeofday(GLIBC_2.2.5) [1]	lrand48(GLIBC_2.2.5)lrand48(GLIBC_2.2.5) [1]	setstate(GLIBC_2.2.5)setstate(GLIBC_2.2.5) [1]	

225

226 *Referenced Specification(s)*227 **[1].** ISO/IEC 9945: POSIX (2003-Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
228 V3)229 **[2].** Linux Standard Basethis specification230 **[3].** CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0,
231 €606)SUSv2232 An LSB conforming implementation shall provide the architecture specific data interfaces for Standard Library
233 specified in Table 1-27, with the full functionality as described in the referenced underlying specification.

234 **Table 1-27. libc - Standard Library Data Interfaces**

<code>__environ(GLIBC_2.2.5)</code> <code>__environ(GLIBC_2.2.5)</code> [1]	<code>__sys_errlist(GLIBC_2.3)</code> <code>__sys_errlist(GLIBC_2.3)</code> [1]	<code>getdate_err(GLIBC_2.2.5)</code> <code>getdate_err(GLIBC_2.2.5)</code> [2]	<code>opterr(GLIBC_2.2.5)</code> <code>opterr(GLIBC_2.2.5)</code> [1]	<code>optopt(GLIBC_2.2.5)</code> <code>optopt(GLIBC_2.2.5)</code> [1]
<code>__environ(GLIBC_2.2.5)</code> <code>__environ(GLIBC_2.2.5)</code> [1]	<code>environ(GLIBC_2.2.5)</code> <code>environ(GLIBC_2.2.5)</code> [2]	<code>optarg(GLIBC_2.2.5)</code> <code>optarg(GLIBC_2.2.5)</code> [2]	<code>optind(GLIBC_2.2.5)</code> <code>optind(GLIBC_2.2.5)</code> [1]	

236 *Referenced Specification(s)*237 [1]. ~~Linux Standard Base~~ this specification238 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System)~~ ~~and The Single UNIX® Specification~~ (SUS)239 ~~V3)~~

1.3. Data Definitions for libc

240 This section defines global identifiers and their values that are associated with interfaces contained in `libc`. These
 241 definitions are organized into groups that correspond to system headers. This convention is used as a convenience for
 242 the reader, and does not imply the existence of these headers, or their content.

243 These definitions are intended to supplement those provided in the referenced underlying specifications.

244 This specification uses ISO/IEC 9899 C Language as the reference programming language, and data definitions are
 245 specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of
 246 these data objects does not preclude their use by other programming languages.

1.3.1. errno.h

```
247
248 #define EDEADLOCK          EDEADLK
```

1.3.2. inttypes.h

```
249
250 typedef long intmax_t;
251 typedef unsigned long uintptr_t;
252 typedef unsigned long uintmax_t;
253 typedef unsigned long uint64_t;
```

1.3.3. limits.h

```
254
255 #define LONG_MAX           0x7FFFFFFFFFFFFFFFL
256 #define ULONG_MAX        0xFFFFFFFFFFFFFFFFUL
257
258 #define CHAR_MAX         127
259 #define CHAR_MIN         SCHAR_MIN
```

1.3.4. setjmp.h

```

260
261 typedef long __jmp_buf[8];

```

1.3.5. signal.h

```

262
263 struct sigaction
264 {
265     union
266     {
267         sighandler_t _sa_handler;
268         void (*_sa_sigaction) (int, siginfo_t *, void *);
269     }
270     __sigaction_handler;
271     sigset_t sa_mask;
272     int sa_flags;
273     void (*sa_restorer) (void);
274 }
275 ;
276 #define MINSIGSTKSZ      2048
277 #define SIGSTKSZ        8192
278
279 struct _fpxreg
280 {
281     unsigned short significand[4];
282     unsigned short exponent;
283     unsigned short padding[3];
284 }
285 ;
286 struct _xmmreg
287 {
288     uint32_t element[4];
289 }
290 ;
291
292 struct _fpstate
293 {
294     uint16_t cwd;
295     uint16_t swd;
296     uint16_t ftw;
297     uint16_t fop;
298     uint64_t rip;
299     uint64_t rdp;
300     uint32_t mxcsr;
301     uint32_t mxcr_mask;
302     struct _fpxreg _st[8];
303     struct _xmmreg _xmm[16];
304     uint32_t padding[24];
305 }
306 ;

```

```

307
308 struct sigcontext
309 {
310     unsigned long r8;
311     unsigned long r9;
312     unsigned long r10;
313     unsigned long r11;
314     unsigned long r12;
315     unsigned long r13;
316     unsigned long r14;
317     unsigned long r15;
318     unsigned long rdi;
319     unsigned long rsi;
320     unsigned long rbp;
321     unsigned long rbx;
322     unsigned long rdx;
323     unsigned long rax;
324     unsigned long rcx;
325     unsigned long rsp;
326     unsigned long rip;
327     unsigned long eflags;
328     unsigned short cs;
329     unsigned short gs;
330     unsigned short fs;
331     unsigned short __pad0;
332     unsigned long err;
333     unsigned long trapno;
334     unsigned long oldmask;
335     unsigned long cr2;
336     struct _fpstate *fpstate;
337     unsigned long __reserved1[8];
338 }
339 ;

```

1.3.6. stddef.h

```

340
341 typedef long ptrdiff_t;
342 typedef unsigned long size_t;

```

1.3.7. sys/ioctl.h

```

343
344 #define FIONREAD          0x541B
345 #define TIOCNOTTY        21538

```

1.3.8. sys/ipc.h

```

346
347 struct ipc_perm
348 {
349     key_t __key;

```

```

350     uid_t uid;
351     gid_t gid;
352     uid_t cuid;
353     uid_t cgid;
354     unsigned short mode;
355     unsigned short __pad1;
356     unsigned short __seq;
357     unsigned short __pad2;
358     unsigned long __unused1;
359     unsigned long __unused2;
360 }
361 ;

```

1.3.9. sys/mman.h

```

362
363 #define MCL_CURRENT      1
364 #define MCL_FUTURE     2

```

1.3.10. sys/msg.h

```

365
366 typedef unsigned long msgqnum_t;
367 typedef unsigned long msglen_t;
368
369 struct msqid_ds
370 {
371     struct ipc_perm msg_perm;
372     time_t msg_stime;
373     time_t msg_rtime;
374     time_t msg_ctime;
375     unsigned long __msg_cbytes;
376     msgqnum_t msg_qnum;
377     msglen_t msg_qbytes;
378     pid_t msg_lspid;
379     pid_t msg_lrpid;
380     unsigned long __unused4;
381     unsigned long __unused5;
382 }
383 ;

```

1.3.11. sys/sem.h

```

384
385 struct semid_ds
386 {
387     struct ipc_perm sem_perm;
388     time_t sem_otime;
389     unsigned long __unused1;
390     time_t sem_ctime;
391     unsigned long __unused2;
392     unsigned long sem_nsems;

```

```

393     unsigned long __unused3;
394     unsigned long __unused4;
395 }
396 ;

```

1.3.12. sys/shm.h

```

397
398 #define SHMLBA (__getpagesize())
399
400 typedef unsigned long shmatt_t;
401
402 struct shmid_ds
403 {
404     struct ipc_perm shm_perm;
405     size_t shm_segsz;
406     time_t shm_atime;
407     time_t shm_dtime;
408     time_t shm_ctime;
409     pid_t shm_cpid;
410     pid_t shm_lpid;
411     shmatt_t shm_nattch;
412     unsigned long __unused4;
413     unsigned long __unused5;
414 }
415 ;

```

1.3.13. sys/socket.h

```

416
417 typedef uint64_t __ss_aligntype;

```

1.3.14. sys/stat.h

```

418
419 #define _STAT_VER      1
420
421 struct stat
422 {
423     dev_t st_dev;
424     ino_t st_ino;
425     nlink_t st_nlink;
426     mode_t st_mode;
427     uid_t st_uid;
428     gid_t st_gid;
429     int pad0;
430     dev_t st_rdev;
431     off_t st_size;
432     blksize_t st_blksize;
433     blkcnt_t st_blocks;
434     struct timespec st_atim;
435     struct timespec st_mtim;

```

```

436     struct timespec st_ctim;
437     unsigned long __unused[3];
438 }
439 ;
440 struct stat64
441 {
442     dev_t st_dev;
443     ino64_t st_ino;
444     nlink_t st_nlink;
445     mode_t st_mode;
446     uid_t st_uid;
447     gid_t st_gid;
448     int pad0;
449     dev_t st_rdev;
450     off_t st_size;
451     blksize_t st_blksize;
452     blkcnt64_t st_blocks;
453     struct timespec st_atim;
454     struct timespec st_mtim;
455     struct timespec st_ctim;
456     unsigned long __unused[3];
457 }
458 ;

```

1.3.15. sys/statvfs.h

```

459
460 struct statvfs64
461 {
462     unsigned long f_bsize;
463     unsigned long f_frsize;
464     fsblkcnt64_t f_blocks;
465     fsblkcnt64_t f_bfree;
466     fsblkcnt64_t f_bavail;
467     fsfilcnt64_t f_files;
468     fsfilcnt64_t f_ffree;
469     fsfilcnt64_t f_favail;
470     unsigned long f_fsid;
471     unsigned long f_flag;
472     unsigned long f_namemax;
473     int __f_spare[6];
474 }
475 ;
476 struct statvfs
477 {
478     unsigned long f_bsize;
479     unsigned long f_frsize;
480     fsblkcnt_t f_blocks;
481     fsblkcnt_t f_bfree;
482     fsblkcnt_t f_bavail;
483     fsfilcnt_t f_files;
484     fsfilcnt_t f_ffree;

```

```

485     fsfilcnt_t f_favail;
486     unsigned long f_fsid;
487     unsigned long f_flag;
488     unsigned long f_namemax;
489     int __f_spare[6];
490 }
491 ;

```

1.3.16. sys/types.h

```

492
493 typedef long int64_t;
494
495 typedef int64_t ssize_t;

```

1.3.17. termios.h

```

496
497 #define OLCUC    0000002
498 #define ONLCR   0000004
499 #define XCASE   0000004
500 #define NLDLY   0000400
501 #define CR1     0001000
502 #define IUCLC   0001000
503 #define CR2     0002000
504 #define CR3     0003000
505 #define CRDLY   0003000
506 #define TAB1    0004000
507 #define TAB2    0010000
508 #define TAB3    0014000
509 #define TABDLY  0014000
510 #define BS1     0020000
511 #define BSDLY   0020000
512 #define VT1     0040000
513 #define VTDLY   0040000
514 #define FF1     0100000
515 #define FFDLY   0100000
516
517 #define VSUSP   10
518 #define VEOL    11
519 #define VREPRINT      12
520 #define VDISCARD     13
521 #define VWERASE 14
522 #define VEOL2   16
523 #define VMIN    6
524 #define VSWTC   7
525 #define VSTART  8
526 #define VSTOP   9
527
528 #define IXON    0002000
529 #define IXOFF   0010000
530

```

```

531 #define CS6      0000020
532 #define CS7      0000040
533 #define CS8      0000060
534 #define CSIZE    0000060
535 #define CSTOPB   0000100
536 #define CREAD    0000200
537 #define PARENB   0000400
538 #define PARODD   0001000
539 #define HUPCL    0002000
540 #define CLOCAL   0004000
541 #define VTIME    5
542
543 #define ISIG      0000001
544 #define ICANON    0000002
545 #define ECHOE     0000020
546 #define ECHOK     0000040
547 #define ECHONL   0000100
548 #define NOFLSH   0000200
549 #define TOSTOP   0000400
550 #define ECHOCTL   0001000
551 #define ECHOPRT  0002000
552 #define ECHOKE    0004000
553 #define FLUSHO    0010000
554 #define PENDIN   0040000
555 #define IEXTEN   0100000

```

1.3.18. ucontext.h

```

556
557 struct _libc_fpxreg
558 {
559     unsigned short significand[4];
560     unsigned short exponent;
561     unsigned short padding[3];
562 }
563 ;
564
565 typedef long greg_t;
566 #define NGREG    23
567
568 typedef greg_t gregset_t[23];
569
570 struct _libc_xmmreg
571 {
572     uint32_t element[4];
573 }
574 ;
575 struct _libc_fpstate
576 {
577     uint16_t cwd;
578     uint16_t swd;
579     uint16_t ftw;

```



```

580     uint16_t fop;
581     uint64_t rip;
582     uint64_t rdp;
583     uint32_t mxcsr;
584     uint32_t mxcr_mask;
585     struct _libc_fpxreg _st[8];
586     struct _libc_xmmreg _xmm[16];
587     uint32_t padding[24];
588 }
589 ;
590 typedef struct _libc_fpstate *fpregset_t;
591
592 typedef struct
593 {
594     gregset_t gregs;
595     fpregset_t fpregs;
596     unsigned long __reserved1[8];
597 }
598 mcontext_t;
599
600 typedef struct ucontext
601 {
602     unsigned long uc_flags;
603     struct ucontext *uc_link;
604     stack_t uc_stack;
605     mcontext_t uc_mcontext;
606     sigset_t uc_sigmask;
607     struct _libc_fpstate __fpregs_mem;
608 }
609 ucontext_t;

```

1.3.19. unistd.h

```

610
611 typedef long intptr_t;

```

1.3.20. utmp.h

```

612
613 struct lastlog
614 {
615     int32_t ll_time;
616     char ll_line[UT_LINESIZE];
617     char ll_host[UT_HOSTSIZE];
618 }
619 ;
620
621 struct utmp
622 {
623     short ut_type;
624     pid_t ut_pid;
625     char ut_line[UT_LINESIZE];

```

```

626     char ut_id[4];
627     char ut_user[UT_NAMESIZE];
628     char ut_host[UT_HOSTSIZE];
629     struct exit_status ut_exit;
630     int ut_session;
631     struct
632     {
633         int32_t tv_sec;
634         int32_t tv_usec;
635     }
636     ut_tv;
637     int32_t ut_addr_v6[4];
638     char __unused[20];
639 }
640 ;

```

1.3.21. utmpx.h

```

641
642 struct utmpx
643 {
644     short ut_type;
645     pid_t ut_pid;
646     char ut_line[UT_LINESIZE];
647     char ut_id[4];
648     char ut_user[UT_NAMESIZE];
649     char ut_host[UT_HOSTSIZE];
650     struct exit_status ut_exit;
651     int32_t ut_session;
652     struct
653     {
654         int32_t tv_sec;
655         int32_t tv_usec;
656     }
657     ut_tv;
658     int32_t ut_addr_v6[4];
659     char __unused[20];
660 }
661 ;

```

1.4. Interfaces for libm

662 Table 1-28 defines the library name and shared object name for the libm library

663 **Table 1-28. libm Definition**

Library:	libm
SONAME:	libm.so.6

665 The behavior of the interfaces in this library is specified by the following specifications:

ISO/IEC 9899: C (1999, Programming Languages—C)

CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1 85912 181 0, C606)SUSv2

666

ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)

1.4.1. Math

667

1.4.1.1. Interfaces for Math

668

An LSB conforming implementation shall provide the architecture specific functions for Math specified in Table 1-29, with the full functionality as described in the referenced underlying specification.

669

670

Table 1-29. libm - Math Function Interfaces

<code>acos(GLIBC_2.2.5)</code> [1]	<code>acosh(GLIBC_2.2.5)</code> [1]	<code>acoshf(GLIBC_2.2.5)</code> [1]	<code>acoshl(GLIBC_2.2.5)</code> [1]	<code>remquo(GLIBC_2.2.5)</code> [1]
<code>acosf(GLIBC_2.2.5)</code> [1]	<code>acoshf(GLIBC_2.2.5)</code> [1]	<code>acoshl(GLIBC_2.2.5)</code> [1]	<code>remquo(GLIBC_2.2.5)</code> [1]	<code>remquo(GLIBC_2.2.5)</code> [1]
<code>aeosh(GLIBC_2.2.5)</code> [1]	<code>aeoshf(GLIBC_2.2.5)</code> [1]	<code>aeoshl(GLIBC_2.2.5)</code> [1]	<code>rint(GLIBC_2.2.5)</code> [1]	<code>rint(GLIBC_2.2.5)</code> [1]
<code>aeoshf(GLIBC_2.2.5)</code> [1]	<code>aeoshl(GLIBC_2.2.5)</code> [1]	<code>rint(GLIBC_2.2.5)</code> [1]	<code>rintf(GLIBC_2.2.5)</code> [1]	<code>rintf(GLIBC_2.2.5)</code> [1]
<code>aeoshl(GLIBC_2.2.5)</code> [1]	<code>rint(GLIBC_2.2.5)</code> [1]	<code>rintf(GLIBC_2.2.5)</code> [1]	<code>rintl(GLIBC_2.2.5)</code> [1]	<code>rintl(GLIBC_2.2.5)</code> [1]
<code>aeosl(GLIBC_2.2.5)</code> [1]	<code>rintl(GLIBC_2.2.5)</code> [1]	<code>rintl(GLIBC_2.2.5)</code> [1]	<code>round(GLIBC_2.2.5)</code> [1]	<code>round(GLIBC_2.2.5)</code> [1]
<code>asin(GLIBC_2.2.5)</code> [1]	<code>round(GLIBC_2.2.5)</code> [1]	<code>roundf(GLIBC_2.2.5)</code> [1]	<code>roundf(GLIBC_2.2.5)</code> [1]	<code>roundf(GLIBC_2.2.5)</code> [1]
<code>asinf(GLIBC_2.2.5)</code> [1]	<code>roundf(GLIBC_2.2.5)</code> [1]	<code>roundl(GLIBC_2.2.5)</code> [1]	<code>roundl(GLIBC_2.2.5)</code> [1]	<code>roundl(GLIBC_2.2.5)</code> [1]
<code>asinh(GLIBC_2.2.5)</code> [1]	<code>roundl(GLIBC_2.2.5)</code> [1]	<code>scalb(GLIBC_2.2.5)</code> [1]	<code>scalb(GLIBC_2.2.5)</code> [1]	<code>scalb(GLIBC_2.2.5)</code> [1]
<code>asinhf(GLIBC_2.2.5)</code> [1]	<code>scalb(GLIBC_2.2.5)</code> [1]	<code>scalbf(GLIBC_2.2.5)</code> [1]	<code>scalbf(GLIBC_2.2.5)</code> [1]	<code>scalbf(GLIBC_2.2.5)</code> [1]

2.5) [1]	2.2.5) [2]	pt(GLIBC_2.2.5) [1]	C_2.2.5) [1]	5) [2]
asinh(GLIBC_2.2.5) asinh(GLIBC_2.2.5) [1]	elogf(GLIBC_2.2.5) clogf(GLIBC_2.2.5) [1]	fegetenv(GLIBC_2.2.5) fegetenv(GLIBC_2.2.5) [1]	lgamma_r(GLIBC_2.2.5) lgamma_r(GLIBC_2.2.5) [2]	scalbl(GLIBC_2.2.5) scalbl(GLIBC_2.2.5) [2]
asinl(GLIBC_2.2.5) asinl(GLIBC_2.2.5) [1]	elogl(GLIBC_2.2.5) clogl(GLIBC_2.2.5) [1]	fegetexceptflag(GLIBC_2.2.5) fegetexceptflag(GLIBC_2.2.5) [1]	llrint(GLIBC_2.2.5) llrint(GLIBC_2.2.5) [1]	scalbln(GLIBC_2.2.5) scalbln(GLIBC_2.2.5) [1]
atan(GLIBC_2.2.5) atan(GLIBC_2.2.5) [1]	econj(GLIBC_2.2.5) conj(GLIBC_2.2.5) [1]	fegetround(GLIBC_2.2.5) fegetround(GLIBC_2.2.5) [1]	llrintf(GLIBC_2.2.5) llrintf(GLIBC_2.2.5) [1]	scalblnf(GLIBC_2.2.5) scalblnf(GLIBC_2.2.5) [1]
atan2(GLIBC_2.2.5) atan2(GLIBC_2.2.5) [1]	econjf(GLIBC_2.2.5) conjf(GLIBC_2.2.5) [1]	feholdexcept(GLIBC_2.2.5) feholdexcept(GLIBC_2.2.5) [1]	llrintl(GLIBC_2.2.5) llrintl(GLIBC_2.2.5) [1]	scalblnl(GLIBC_2.2.5) scalblnl(GLIBC_2.2.5) [1]
atan2f(GLIBC_2.2.5) atan2f(GLIBC_2.2.5) [1]	econjf(GLIBC_2.2.5) conjf(GLIBC_2.2.5) [1]	feraiseexcept(GLIBC_2.2.5) feraiseexcept(GLIBC_2.2.5) [1]	llround(GLIBC_2.2.5) llround(GLIBC_2.2.5) [1]	scalbn(GLIBC_2.2.5) scalbn(GLIBC_2.2.5) [1]
atan2l(GLIBC_2.2.5) atan2l(GLIBC_2.2.5) [1]	eopysign(GLIBC_2.2.5) copysign(GLIBC_2.2.5) [1]	fesetenv(GLIBC_2.2.5) fesetenv(GLIBC_2.2.5) [1]	llroundf(GLIBC_2.2.5) llroundf(GLIBC_2.2.5) [1]	scalbnf(GLIBC_2.2.5) scalbnf(GLIBC_2.2.5) [1]
atanf(GLIBC_2.2.5) atanf(GLIBC_2.2.5) [1]	eopysignf(GLIBC_2.2.5) copysignf(GLIBC_2.2.5) [1]	fesetexceptflag(GLIBC_2.2.5) fesetexceptflag(GLIBC_2.2.5) [1]	llroundl(GLIBC_2.2.5) llroundl(GLIBC_2.2.5) [1]	scalbnl(GLIBC_2.2.5) scalbnl(GLIBC_2.2.5) [1]
atanh(GLIBC_2.2.5) atanh(GLIBC_2.2.5) [1]	eopysignl(GLIBC_2.2.5) copysignl(GLIBC_2.2.5) [1]	fesetround(GLIBC_2.2.5) fesetround(GLIBC_2.2.5) [1]	log(GLIBC_2.2.5) log(GLIBC_2.2.5) [1]	significand(GLIBC_2.2.5) significand(GLIBC_2.2.5) [2]
atanhf(GLIBC_2.2.5) atanhf(GLIBC_2.2.5) [1]	eos(GLIBC_2.2.5) cos(GLIBC_2.2.5) [1]	fetestexcept(GLIBC_2.2.5) fetetestexcept(GLIBC_2.2.5) [1]	log10(GLIBC_2.2.5) log10(GLIBC_2.2.5) [1]	significandf(GLIBC_2.2.5) significandf(GLIBC_2.2.5) [2]
atanhl(GLIBC_2.2.5) atanhhl(GLIBC_2.2.5) [1]	eosf(GLIBC_2.2.5) cosf(GLIBC_2.2.5) [1]	feupdateenv(GLIBC_2.2.5) feupdateenv(GLIBC_2.2.5) [1]	log10f(GLIBC_2.2.5) log10f(GLIBC_2.2.5) [1]	significandl(GLIBC_2.2.5) significandl(GLIBC_2.2.5) [2]
atanl(GLIBC_2.2.5) atanl(GLIBC_2.2.5) [1]	eosh(GLIBC_2.2.5) cosh(GLIBC_2.2.5) [1]	finite(GLIBC_2.2.5) finite(GLIBC_2.2.5) [3]	log10l(GLIBC_2.2.5) log10l(GLIBC_2.2.5) [1]	sin(GLIBC_2.2.5) sin(GLIBC_2.2.5) [1]
eabs(GLIBC_2.2.5) cabs(GLIBC_2.2.5)	eoshf(GLIBC_2.2.5) coshf(GLIBC_2.2.5)	finitef(GLIBC_2.2.5) finitef(GLIBC_2.2.5)	log1p(GLIBC_2.2.5) log1p(GLIBC_2.2.5)	sincos(GLIBC_2.2.5) sincos(GLIBC_2.2.5)

[1]	5) [1]	2.5) [2]	5) [1]	2.5) [2]
eabsf(GLIBC_2.2.5))cabsf(GLIBC_2.2.5) [1]	eoshl(GLIBC_2.2.5))coshl(GLIBC_2.2.5) [1]	finitel(GLIBC_2.2.5))finitel(GLIBC_2.2.5) [2]	logb(GLIBC_2.2.5) ogb(GLIBC_2.2.5) [1]	sineosf(GLIBC_2.2.5))sincosf(GLIBC_2.2.5) [2]
eabsl(GLIBC_2.2.5) cabsl(GLIBC_2.2.5) [1]	eosl(GLIBC_2.2.5) osl(GLIBC_2.2.5) [1]	floor(GLIBC_2.2.5) floor(GLIBC_2.2.5) [1]	logf(GLIBC_2.2.5) ogf(GLIBC_2.2.5) [1]	sineosl(GLIBC_2.2.5))sincosl(GLIBC_2.2.5) [2]
eacos(GLIBC_2.2.5))cacos(GLIBC_2.2.5) [1]	epow(GLIBC_2.2.5))cpow(GLIBC_2.2.5) [1]	floorf(GLIBC_2.2.5))floorf(GLIBC_2.2.5) [1]	logl(GLIBC_2.2.5) ogl(GLIBC_2.2.5) [1]	sinf(GLIBC_2.2.5) inf(GLIBC_2.2.5) [1]
eacosf(GLIBC_2.2.5))cacosf(GLIBC_2.2.5) [1]	epowf(GLIBC_2.2.5))cpowf(GLIBC_2.2.5) [1]	floorl(GLIBC_2.2.5))floorl(GLIBC_2.2.5) [1]	lrint(GLIBC_2.2.5) rint(GLIBC_2.2.5) [1]	sinh(GLIBC_2.2.5) inh(GLIBC_2.2.5) [1]
eacosh(GLIBC_2.2.5))cacosh(GLIBC_2.2.5) [1]	epowl(GLIBC_2.2.5))cpowl(GLIBC_2.2.5) [1]	fma(GLIBC_2.2.5) fma(GLIBC_2.2.5) [1]	lrintf(GLIBC_2.2.5) lrintf(GLIBC_2.2.5) [1]	sinhf(GLIBC_2.2.5) sinhf(GLIBC_2.2.5) [1]
eacoshf(GLIBC_2.2.5))cacoshf(GLIBC_2.2.5) [1]	eprojl(GLIBC_2.2.5))cprojl(GLIBC_2.2.5) [1]	fmaf(GLIBC_2.2.5) fmaf(GLIBC_2.2.5) [1]	lrintl(GLIBC_2.2.5) lrintl(GLIBC_2.2.5) [1]	sinhl(GLIBC_2.2.5) sinhl(GLIBC_2.2.5) [1]
eacoshl(GLIBC_2.2.5))cacoshl(GLIBC_2.2.5) [1]	eprojf(GLIBC_2.2.5))cprojf(GLIBC_2.2.5) [1]	fmal(GLIBC_2.2.5) fmal(GLIBC_2.2.5) [1]	lround(GLIBC_2.2.5))lround(GLIBC_2.2.5) [1]	sinl(GLIBC_2.2.5) inl(GLIBC_2.2.5) [1]
eacosl(GLIBC_2.2.5))cacosl(GLIBC_2.2.5) [1]	eprojl(GLIBC_2.2.5))cprojl(GLIBC_2.2.5) [1]	fmax(GLIBC_2.2.5) fmax(GLIBC_2.2.5) [1]	lroundf(GLIBC_2.2.5))lroundf(GLIBC_2.2.5) [1]	sqrt(GLIBC_2.2.5) qrt(GLIBC_2.2.5) [1]
earg(GLIBC_2.2.5) carg(GLIBC_2.2.5) [1]	erealf(GLIBC_2.2.5) crealf(GLIBC_2.2.5) [1]	fmaxf(GLIBC_2.2.5))fmaxf(GLIBC_2.2.5) [1]	lroundl(GLIBC_2.2.5))lroundl(GLIBC_2.2.5) [1]	sqrtf(GLIBC_2.2.5) sqrtf(GLIBC_2.2.5) [1]
eargf(GLIBC_2.2.5) cargf(GLIBC_2.2.5) [1]	erealf(GLIBC_2.2.5))crealf(GLIBC_2.2.5) [1]	fmaxl(GLIBC_2.2.5))fmaxl(GLIBC_2.2.5) [1]	matherr(GLIBC_2.2.5))matherr(GLIBC_2.2.5) [2]	sqrtl(GLIBC_2.2.5) sqrtl(GLIBC_2.2.5) [1]
eargl(GLIBC_2.2.5) cargl(GLIBC_2.2.5) [1]	ereall(GLIBC_2.2.5))creall(GLIBC_2.2.5) [1]	fmin(GLIBC_2.2.5) fmin(GLIBC_2.2.5) [1]	modf(GLIBC_2.2.5))modf(GLIBC_2.2.5) [1]	tan(GLIBC_2.2.5) tan(GLIBC_2.2.5) [1]
easin(GLIBC_2.2.5) casin(GLIBC_2.2.5) [1]	esin(GLIBC_2.2.5) sin(GLIBC_2.2.5) [1]	fminf(GLIBC_2.2.5))fminf(GLIBC_2.2.5) [1]	modff(GLIBC_2.2.5))modff(GLIBC_2.2.5) [1]	tanf(GLIBC_2.2.5) tanf(GLIBC_2.2.5) [1]
easinf(GLIBC_2.2.5))casinf(GLIBC_2.2.5) [1]	esinf(GLIBC_2.2.5) csinf(GLIBC_2.2.5) [1]	fminl(GLIBC_2.2.5))fminl(GLIBC_2.2.5) [1]	modfl(GLIBC_2.2.5))modfl(GLIBC_2.2.5) [1]	tanh(GLIBC_2.2.5) anh(GLIBC_2.2.5) [1]

<code>easinh(GLIBC_2.2.5)casinh(GLIBC_2.2.5)</code> [1]	<code>esinh(GLIBC_2.2.5)csinh(GLIBC_2.2.5)</code> [1]	<code>fmod(GLIBC_2.2.5)fmod(GLIBC_2.2.5)</code> [1]	<code>nan(GLIBC_2.2.5)nan(GLIBC_2.2.5)</code> [1]	<code>tanhf(GLIBC_2.2.5)tanhf(GLIBC_2.2.5)</code> [1]
<code>easinhf(GLIBC_2.2.5)casinhf(GLIBC_2.2.5)</code> [1]	<code>esinhf(GLIBC_2.2.5)csinhf(GLIBC_2.2.5)</code> [1]	<code>fmodf(GLIBC_2.2.5)fmodf(GLIBC_2.2.5)</code> [1]	<code>nanf(GLIBC_2.2.5)nanf(GLIBC_2.2.5)</code> [1]	<code>tanh(GLIBC_2.2.5)tanh(GLIBC_2.2.5)</code> [1]
<code>easinhL(GLIBC_2.2.5)casinhL(GLIBC_2.2.5)</code> [1]	<code>esinhL(GLIBC_2.2.5)csinhL(GLIBC_2.2.5)</code> [1]	<code>fmodL(GLIBC_2.2.5)fmodL(GLIBC_2.2.5)</code> [1]	<code>nanl(GLIBC_2.2.5)nanl(GLIBC_2.2.5)</code> [1]	<code>tanl(GLIBC_2.2.5)tanl(GLIBC_2.2.5)</code> [1]
<code>easin(GLIBC_2.2.5)csinl(GLIBC_2.2.5)</code> [1]	<code>esinl(GLIBC_2.2.5)csinl(GLIBC_2.2.5)</code> [1]	<code>frexp(GLIBC_2.2.5)frexp(GLIBC_2.2.5)</code> [1]	<code>nearbyint(GLIBC_2.2.5)nearbyint(GLIBC_2.2.5)</code> [1]	<code>tgamma(GLIBC_2.2.5)tgamma(GLIBC_2.2.5)</code> [1]
<code>ecatan(GLIBC_2.2.5)ccatan(GLIBC_2.2.5)</code> [1]	<code>esqrt(GLIBC_2.2.5)csqrt(GLIBC_2.2.5)</code> [1]	<code>frexpf(GLIBC_2.2.5)frexpf(GLIBC_2.2.5)</code> [1]	<code>nearbyintf(GLIBC_2.2.5)nearbyintf(GLIBC_2.2.5)</code> [1]	<code>tgammaf(GLIBC_2.2.5)tgammaf(GLIBC_2.2.5)</code> [1]
<code>ecatanf(GLIBC_2.2.5)ccatanf(GLIBC_2.2.5)</code> [1]	<code>esqrtf(GLIBC_2.2.5)csqrtf(GLIBC_2.2.5)</code> [1]	<code>frexpl(GLIBC_2.2.5)frexpl(GLIBC_2.2.5)</code> [1]	<code>nearbyintl(GLIBC_2.2.5)nearbyintl(GLIBC_2.2.5)</code> [1]	<code>tgammal(GLIBC_2.2.5)tgammal(GLIBC_2.2.5)</code> [1]
<code>ecatanh(GLIBC_2.2.5)ccatanh(GLIBC_2.2.5)</code> [1]	<code>esqrtL(GLIBC_2.2.5)csqrtL(GLIBC_2.2.5)</code> [1]	<code>gamma(GLIBC_2.2.5)gamma(GLIBC_2.2.5)</code> [3]	<code>nextafter(GLIBC_2.2.5)nextafter(GLIBC_2.2.5)</code> [1]	<code>trunc(GLIBC_2.2.5)trunc(GLIBC_2.2.5)</code> [1]
<code>ecatanhf(GLIBC_2.2.5)ccatanhf(GLIBC_2.2.5)</code> [1]	<code>etan(GLIBC_2.2.5)ctan(GLIBC_2.2.5)</code> [1]	<code>gammaf(GLIBC_2.2.5)gammaf(GLIBC_2.2.5)</code> [2]	<code>nextafterf(GLIBC_2.2.5)nextafterf(GLIBC_2.2.5)</code> [1]	<code>truncf(GLIBC_2.2.5)truncf(GLIBC_2.2.5)</code> [1]
<code>ecatanhl(GLIBC_2.2.5)ccatanhl(GLIBC_2.2.5)</code> [1]	<code>etanf(GLIBC_2.2.5)ctanf(GLIBC_2.2.5)</code> [1]	<code>gammal(GLIBC_2.2.5)gammal(GLIBC_2.2.5)</code> [2]	<code>nextafterl(GLIBC_2.2.5)nextafterl(GLIBC_2.2.5)</code> [1]	<code>truncl(GLIBC_2.2.5)truncl(GLIBC_2.2.5)</code> [1]
<code>ecatanl(GLIBC_2.2.5)ccatanl(GLIBC_2.2.5)</code> [1]	<code>etanh(GLIBC_2.2.5)ctanh(GLIBC_2.2.5)</code> [1]	<code>hypot(GLIBC_2.2.5)hypot(GLIBC_2.2.5)</code> [1]	<code>nexttoward(GLIBC_2.2.5)nexttoward(GLIBC_2.2.5)</code> [1]	<code>y0(GLIBC_2.2.5)y0(GLIBC_2.2.5)</code> [1]
<code>ebrt(GLIBC_2.2.5)cbrt(GLIBC_2.2.5)</code> [1]	<code>etanhf(GLIBC_2.2.5)ctanhf(GLIBC_2.2.5)</code> [1]	<code>hypotf(GLIBC_2.2.5)hypotf(GLIBC_2.2.5)</code> [1]	<code>nexttowardf(GLIBC_2.2.5)nexttowardf(GLIBC_2.2.5)</code> [1]	<code>y0f(GLIBC_2.2.5)y0f(GLIBC_2.2.5)</code> [2]
<code>ebrtf(GLIBC_2.2.5)cbrtf(GLIBC_2.2.5)</code> [1]	<code>etanhL(GLIBC_2.2.5)ctanhL(GLIBC_2.2.5)</code> [1]	<code>hypotL(GLIBC_2.2.5)hypotL(GLIBC_2.2.5)</code> [1]	<code>nexttowardl(GLIBC_2.2.5)nexttowardl(GLIBC_2.2.5)</code> [1]	<code>y0l(GLIBC_2.2.5)y0l(GLIBC_2.2.5)</code> [2]
<code>ebrtl(GLIBC_2.2.5)cbrtl(GLIBC_2.2.5)</code> [1]	<code>etanl(GLIBC_2.2.5)ctanl(GLIBC_2.2.5)</code> [1]	<code>ilogb(GLIBC_2.2.5)ilogb(GLIBC_2.2.5)</code> [1]	<code>pow(GLIBC_2.2.5)pow(GLIBC_2.2.5)</code> [1]	<code>y1(GLIBC_2.2.5)y1(GLIBC_2.2.5)</code> [1]
<code>eeos(GLIBC_2.2.5)</code>	<code>dremf(GLIBC_2.2.5)</code>	<code>ilogbf(GLIBC_2.2.5)</code>	<code>pow10(GLIBC_2.2.5)</code>	<code>y1f(GLIBC_2.2.5)y</code>

<code>ccos(GLIBC_2.2.5)</code> [1]	<code>dreml(GLIBC_2.2.5)</code> [2]	<code>jlogbl(GLIBC_2.2.5)</code> [1]	<code>pow10(GLIBC_2.2.5)</code> [2]	<code>ylf(GLIBC_2.2.5)</code> [2]
<code>eeosf(GLIBC_2.2.5)</code> <code>ccosf(GLIBC_2.2.5)</code> [1]	<code>dreml(GLIBC_2.2.5)</code> <code>dreml(GLIBC_2.2.5)</code> [2]	<code>ilogbl(GLIBC_2.2.5)</code> <code>jlogbl(GLIBC_2.2.5)</code> [1]	<code>pow10f(GLIBC_2.2.5)</code> <code>pow10f(GLIBC_2.2.5)</code> [2]	<code>yl1(GLIBC_2.2.5)</code> <code>yl1(GLIBC_2.2.5)</code> [2]
<code>eeosh(GLIBC_2.2.5)</code> <code>ccosh(GLIBC_2.2.5)</code> [1]	<code>erf(GLIBC_2.2.5)</code> <code>erf(GLIBC_2.2.5)</code> [1]	<code>j0(GLIBC_2.2.5)</code> <code>j0(GLIBC_2.2.5)</code> [1]	<code>pow10l(GLIBC_2.2.5)</code> <code>pow10l(GLIBC_2.2.5)</code> [2]	<code>yn(GLIBC_2.2.5)</code> <code>yn(GLIBC_2.2.5)</code> [1]
<code>eeoshf(GLIBC_2.2.5)</code> <code>ccoshf(GLIBC_2.2.5)</code> [1]	<code>erfc(GLIBC_2.2.5)</code> <code>erfc(GLIBC_2.2.5)</code> [1]	<code>j0f(GLIBC_2.2.5)</code> <code>j0f(GLIBC_2.2.5)</code> [2]	<code>powf(GLIBC_2.2.5)</code> <code>powf(GLIBC_2.2.5)</code> [1]	<code>ynf(GLIBC_2.2.5)</code> <code>ynf(GLIBC_2.2.5)</code> [2]
<code>eeoshl(GLIBC_2.2.5)</code> <code>ccoshl(GLIBC_2.2.5)</code> [1]	<code>erfcf(GLIBC_2.2.5)</code> <code>erfcf(GLIBC_2.2.5)</code> [1]	<code>j0l(GLIBC_2.2.5)</code> <code>j0l(GLIBC_2.2.5)</code> [2]	<code>powl(GLIBC_2.2.5)</code> <code>powl(GLIBC_2.2.5)</code> [1]	<code>ynl(GLIBC_2.2.5)</code> <code>ynl(GLIBC_2.2.5)</code> [2]
<code>eeosl(GLIBC_2.2.5)</code> <code>ccosl(GLIBC_2.2.5)</code> [1]	<code>erfc1(GLIBC_2.2.5)</code> <code>erfc1(GLIBC_2.2.5)</code> [1]	<code>j1(GLIBC_2.2.5)</code> <code>j1(GLIBC_2.2.5)</code> [1]	<code>remainder(GLIBC_2.2.5)</code> <code>remainder(GLIBC_2.2.5)</code> [1]	
<code>eeil(GLIBC_2.2.5)</code> <code>ceil(GLIBC_2.2.5)</code> [1]	<code>erff(GLIBC_2.2.5)</code> <code>erff(GLIBC_2.2.5)</code> [1]	<code>j1f(GLIBC_2.2.5)</code> <code>j1f(GLIBC_2.2.5)</code> [2]	<code>remainderf(GLIBC_2.2.5)</code> <code>remainderf(GLIBC_2.2.5)</code> [1]	
<code>eeilf(GLIBC_2.2.5)</code> <code>ceilf(GLIBC_2.2.5)</code> [1]	<code>erffl(GLIBC_2.2.5)</code> <code>erffl(GLIBC_2.2.5)</code> [1]	<code>j1l(GLIBC_2.2.5)</code> <code>j1l(GLIBC_2.2.5)</code> [2]	<code>remainderl(GLIBC_2.2.5)</code> <code>remainderl(GLIBC_2.2.5)</code> [1]	
<code>eeill(GLIBC_2.2.5)</code> <code>ceil(GLIBC_2.2.5)</code> [1]	<code>exp(GLIBC_2.2.5)</code> <code>exp(GLIBC_2.2.5)</code> [1]	<code>jn(GLIBC_2.2.5)</code> <code>jn(GLIBC_2.2.5)</code> [1]	<code>remquo(GLIBC_2.2.5)</code> <code>remquo(GLIBC_2.2.5)</code> [1]	

671

672 *Referenced Specification(s)*673 [1]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
674 V3)

675 [2]. ISO/IEC 9899: C (1999, Programming Language—C)

676 [3]. CAE Specification, January 1997, System Interfaces and Headers (XSH), Issue 5 (ISBN: 1-85912-181-0,
677 C606) SUSv2678 An LSB conforming implementation shall provide the architecture specific data interfaces for Math specified in Table
679 1-30, with the full functionality as described in the referenced underlying specification.680 **Table 1-30. libm - Math Data Interfaces**

<code>signgam(GLIBC_2.2.5)</code> <code>signgam(GLIBC_2.2.5)</code> [1]				
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682 *Referenced Specification(s)*

683 [1]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
684 V3)

1.5. Interfaces for libpthread

685 Table 1-31 defines the library name and shared object name for the libpthread library

686 **Table 1-31. libpthread Definition**

Library:	libpthread
SONAME:	libpthread.so.0

688 The behavior of the interfaces in this library is specified by the following specifications:

Large File Support

Linux Standard Base this specification

689 ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)

1.5.1. Realtime Threads

1.5.1.1. Interfaces for Realtime Threads

691 No external functions are defined for libpthread - Realtime Threads

1.5.2. Advanced Realtime Threads

1.5.2.1. Interfaces for Advanced Realtime Threads

693 No external functions are defined for libpthread - Advanced Realtime Threads

1.5.3. Posix Threads

1.5.3.1. Interfaces for Posix Threads

695 An LSB conforming implementation shall provide the architecture specific functions for Posix Threads specified in
696 Table 1-32, with the full functionality as described in the referenced underlying specification.

697 **Table 1-32. libpthread - Posix Threads Function Interfaces**

<code>_pthread_cleanup_pop(GLIBC_2.2.5)_pthread_cleanup_pop(GLIBC_2.2.5) [1]</code>	<code>pthread_cancel(GLIBC_2.2.5)pthread_cancel(GLIBC_2.2.5) [2]</code>	<code>pthread_join(GLIBC_2.2.5)pthread_join(GLIBC_2.2.5) [2]</code>	<code>pthread_rwlock_destroy(GLIBC_2.2.5)pthread_rwlock_destroy(GLIBC_2.2.5) [2]</code>	<code>pthread_setonceonly(GLIBC_2.2.5)pthread_setconcurrency(GLIBC_2.2.5) [2]</code>
<code>_pthread_cleanup_push(GLIBC_2.2.5)_pthread_cleanup_push(GLIBC_2.2.5)</code>	<code>pthread_cond_broadcast(GLIBC_2.3.2)pthread_cond_broadcast</code>	<code>pthread_key_create(GLIBC_2.2.5)pthread_key_create(GLI</code>	<code>pthread_rwlock_init(GLIBC_2.2.5)pthread_rwlock_init(GLI</code>	<code>pthread_setspecific(GLIBC_2.2.5)pthread_setspecific(GLI</code>

sh(GLIBC_2.2.5) [1]	ast(GLIBC_2.3.2) [2]	BC_2.2.5) [2]	BC_2.2.5) [2]	BC_2.2.5) [2]
pread(GLIBC_2.2.5) [2]	pthread_cond_destroy(GLIBC_2.3.2) [2]	pthread_key_delete(GLIBC_2.2.5) [2]	pthread_rwlock_rdlock(GLIBC_2.2.5) [2]	pthread_sigmask(GLIBC_2.2.5) [2]
pread64(GLIBC_2.2.5) [3]	pthread_cond_init(GLIBC_2.3.2) [2]	pthread_kill(GLIBC_2.2.5) [2]	pthread_rwlock_timedrdlock(GLIBC_2.2.5) [2]	pthread_testcancel(GLIBC_2.2.5) [2]
pthread_attr_destroy(GLIBC_2.2.5) [2]	pthread_cond_signal(GLIBC_2.3.2) [2]	pthread_mutex_destroy(GLIBC_2.2.5) [2]	pthread_rwlock_timedwrlock(GLIBC_2.2.5) [2]	pwrite(GLIBC_2.2.5) [2]
pthread_attr_getdetachstate(GLIBC_2.2.5) [2]	pthread_cond_timedwait(GLIBC_2.3.2) [2]	pthread_mutex_init(GLIBC_2.2.5) [2]	pthread_rwlock_tryrdlock(GLIBC_2.2.5) [2]	pwrite64(GLIBC_2.2.5) [3]
pthread_attr_getguardsize(GLIBC_2.2.5) [2]	pthread_cond_wait(GLIBC_2.3.2) [2]	pthread_mutex_lock(GLIBC_2.2.5) [2]	pthread_rwlock_trywrlock(GLIBC_2.2.5) [2]	sem_close(GLIBC_2.2.5) [2]
pthread_attr_getschedparam(GLIBC_2.2.5) [2]	pthread_condattr_destroy(GLIBC_2.2.5) [2]	pthread_mutex_trylock(GLIBC_2.2.5) [2]	pthread_rwlock_unlock(GLIBC_2.2.5) [2]	sem_destroy(GLIBC_2.2.5) [2]
pthread_attr_getstackaddr(GLIBC_2.2.5) [2]	pthread_condattr_getshared(GLIBC_2.2.5) [2]	pthread_mutex_unlock(GLIBC_2.2.5) [2]	pthread_rwlock_wrllock(GLIBC_2.2.5) [2]	sem_getvalue(GLIBC_2.2.5) [2]
pthread_attr_getstacksize(GLIBC_2.2.5) [2]	pthread_condattr_init(GLIBC_2.2.5) [2]	pthread_mutexattr_destroy(GLIBC_2.2.5) [2]	pthread_rwlockattr_destroy(GLIBC_2.2.5) [2]	sem_init(GLIBC_2.2.5) [2]
pthread_attr_init(G	pthread_condattr_se	pthread_mutexattr_	pthread_rwlockattr_	sem_open(GLIBC_

<code>pthread_attr_init(GLIBC_2.2.5)</code> [2]	<code>pthread_condattr_setpshared(GLIBC_2.2.5)</code> [2]	<code>pthread_mutexattr_getpshared(GLIBC_2.2.5)</code> [2]	<code>pthread_rwlockattr_getpshared(GLIBC_2.2.5)</code> [2]	<code>sem_open(GLIBC_2.2.5)</code> [2]
<code>pthread_attr_setdetachstate(GLIBC_2.2.5)</code> [2]	<code>pthread_create(GLIBC_2.2.5)</code> [2]	<code>pthread_mutexattr_gettype(GLIBC_2.2.5)</code> [2]	<code>pthread_rwlockattr_init(GLIBC_2.2.5)</code> [2]	<code>sem_post(GLIBC_2.2.5)</code> [2]
<code>pthread_attr_setguardsize(GLIBC_2.2.5)</code> [2]	<code>pthread_detach(GLIBC_2.2.5)</code> [2]	<code>pthread_mutexattr_init(GLIBC_2.2.5)</code> [2]	<code>pthread_rwlockattr_setpshared(GLIBC_2.2.5)</code> [2]	<code>sem_timedwait(GLIBC_2.2.5)</code> [2]
<code>pthread_attr_setschedparam(GLIBC_2.2.5)</code> [2]	<code>pthread_equal(GLIBC_2.2.5)</code> [2]	<code>pthread_mutexattr_setpshared(GLIBC_2.2.5)</code> [2]	<code>pthread_self(GLIBC_2.2.5)</code> [2]	<code>sem_trywait(GLIBC_2.2.5)</code> [2]
<code>pthread_attr_setstackaddr(GLIBC_2.2.5)</code> [2]	<code>pthread_exit(GLIBC_2.2.5)</code> [2]	<code>pthread_mutexattr_settype(GLIBC_2.2.5)</code> [2]	<code>pthread_setcancelstate(GLIBC_2.2.5)</code> [2]	<code>sem_unlink(GLIBC_2.2.5)</code> [2]
<code>pthread_attr_setstacksize(GLIBC_2.2.5)</code> [2]	<code>pthread_getspecific(GLIBC_2.2.5)</code> [2]	<code>pthread_once(GLIBC_2.2.5)</code> [2]	<code>pthread_setcanceltype(GLIBC_2.2.5)</code> [2]	<code>sem_wait(GLIBC_2.2.5)</code> [2]

698

699 *Referenced Specification(s)*

700 [1]. Linux Standard Base this specification

701 [2]. ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS)
702 V3)

703 [3]. Large File Support

1.6. Interfaces for `libgcc_s`

704 Table 1-33 defines the library name and shared object name for the `libgcc_s` library705 **Table 1-33. `libgcc_s` Definition**

Library:	<code>libgcc_s</code>
----------	-----------------------

SONAME:	libgcc_s.so.1
---------	---------------

707 The behavior of the interfaces in this library is specified by the following specifications:

708 | ~~Linux Standard Base~~this specification

1.6.1. Unwind Library

709 1.6.1.1. Interfaces for Unwind Library

710 An LSB conforming implementation shall provide the architecture specific functions for Unwind Library specified in
711 Table 1-34, with the full functionality as described in the referenced underlying specification.

712 **Table 1-34. libgcc_s - Unwind Library Function Interfaces**

__Unwind_DeleteException(GCC_3.0)_Unwind_DeleteException(GCC_3.0) [1]	__Unwind_GetDataRelBase(GCC_3.0)_Unwind_GetDataRelBase(GCC_3.0) [1]	__Unwind_GetLanguageSpecificData(GCC_3.0)_Unwind_GetLanguageSpecificData(GCC_3.0) [1]	__Unwind_RaiseException(GCC_3.0)_Unwind_RaiseException(GCC_3.0) [1]	__Unwind_SetIP(GCC_3.0)_Unwind_SetIP(GCC_3.0) [1]
__Unwind_Find_FDE(GCC_3.0)_Unwind_Find_FDE(GCC_3.0) [1]	__Unwind_GetGR(GCC_3.0)_Unwind_GetGR(GCC_3.0) [1]	__Unwind_GetRegionStart(GCC_3.0)_Unwind_GetRegionStart(GCC_3.0) [1]	__Unwind_Resume(GCC_3.0)_Unwind_Resume(GCC_3.0) [1]	
__Unwind_ForcedUnwind(GCC_3.0)_Unwind_ForcedUnwind(GCC_3.0) [1]	__Unwind_GetIP(GCC_3.0)_Unwind_GetIP(GCC_3.0) [1]	__Unwind_GetTextRelBase(GCC_3.0)_Unwind_GetTextRelBase(GCC_3.0) [1]	__Unwind_SetGR(GCC_3.0)_Unwind_SetGR(GCC_3.0) [1]	

714 *Referenced Specification(s)*

715 | ~~[1]. Linux Standard Base~~this specification

1.7. Interface Definitions for libgcc_s

716 The following interfaces are included in libgcc_s and are defined by this specification. Unless otherwise noted, these
717 interfaces shall be included in the source standard.

718 Other interfaces listed above for libgcc_s shall behave as described in the referenced base document.

`_Unwind_DeleteException`

Name

719 `_Unwind_DeleteException` — private C++ error handling method

Synopsis

720 `void _Unwind_DeleteException((struct _Unwind_Exception *object));`

Description

721 `_Unwind_DeleteException` deletes the given exception *object*. If a given runtime resumes normal execution
 722 after catching a foreign exception, it will not know how to delete that exception. Such an exception shall be deleted by
 723 calling `_Unwind_DeleteException`. This is a convenience function that calls the function pointed to by the
 724 *exception_cleanup* field of the exception header.

`_Unwind_Find_FDE`

Name

725 `_Unwind_Find_FDE` — private C++ error handling method

Synopsis

726 `fde * _Unwind_Find_FDE(void *pc, (struct dwarf_eh_bases *bases));`

Description

727 `_Unwind_Find_FDE` looks for the object containing *pc*, then inserts into *bases*.

`_Unwind_ForcedUnwind`

Name

728 `_Unwind_ForcedUnwind` — private C++ error handling method

Synopsis

```
729 _Unwind_Reason_Code _Unwind_ForcedUnwind((struct _Unwind_Exception *object),  
730 _Unwind_Stop_Fn stop, void *stop_parameter);
```

Description

731 `_Unwind_ForcedUnwind` raises an exception for forced unwinding, passing along the given exception *object*,
732 which should have its *exception_class* and *exception_cleanup* fields set. The exception *object* has been allocated by
733 the language-specific runtime, and has a language-specific format, except that it shall contain an `_Unwind_Exception`
734 struct.

735 Forced unwinding is a single-phase process. *stop* and *stop_parameter* control the termination of the unwind
736 process instead of the usual personality routine query. *stop* is called for each unwind frame, with the parameters
737 described for the usual personality routine below, plus an additional *stop_parameter*.

Return Value

738 When *stop* identifies the destination frame, it transfers control to the user code as appropriate without returning,
739 normally after calling `_Unwind_DeleteException`. If not, then it should return an `_Unwind_Reason_Code` value.

740 If *stop* returns any reason code other than `_URC_NO_REASON`, then the stack state is indeterminate from the point
741 of view of the caller of `_Unwind_ForcedUnwind`. Rather than attempt to return, therefore, the unwind library should
742 use the *exception_cleanup* entry in the exception, and then call `abort`.

743 `_URC_NO_REASON`

744 This is not the destination from. The unwind runtime will call frame's personality routine with the
745 `_UA_FORCE_UNWIND` and `_UA_CLEANUP_PHASE` flag set in *actions*, and then unwind to the next frame and call
746 the *stop* function again.

747 `_URC_END_OF_STACK`

748 In order to allow `_Unwind_ForcedUnwind` to perform special processing when it reaches the end of the stack,
749 the unwind runtime will call it after the last frame is rejected, with a `NULL` stack pointer in the context, and the
750 *stop* function shall catch this condition. It may return this code if it cannot handle end-of-stack.

751 `_URC_FATAL_PHASE2_ERROR`

752 The *stop* function may return this code for other fatal conditions like stack corruption.

`_Unwind_GetDataRelBase`

Name

753 `_Unwind_GetDataRelBase` — private IA64 C++ error handling method

Synopsis

754 `_Unwind_Ptr _Unwind_GetDataRelBase((struct _Unwind_Context *context));`

Description

755 `_Unwind_GetDataRelBase` returns the global pointer in register one for *context*.

`_Unwind_GetGR`

Name

756 `_Unwind_GetGR` — private C++ error handling method

Synopsis

757 `_Unwind_Word _Unwind_GetGR((struct _Unwind_Context *context), int index);`

Description

758 `_Unwind_GetGR` returns data at *index* found in *context*. The register is identified by its index: 0 to 31 are for the
759 fixed registers, and 32 to 127 are for the stacked registers.

760 During the two phases of unwinding, only GR1 has a guaranteed value, which is the global pointer of the frame
761 referenced by the unwind *context*. If the register has its NAT bit set, the behavior is unspecified.

`_Unwind_GetIP`

Name

762 `_Unwind_GetIP` — private C++ error handling method

Synopsis

763 `_Unwind_Ptr _Unwind_GetIP((struct _Unwind_Context *context));`

Description

764 `_Unwind_GetIP` returns the instruction pointer value for the routine identified by the unwind *context*.

`_Unwind_GetLanguageSpecificData`

Name

765 `_Unwind_GetLanguageSpecificData` — private C++ error handling method

Synopsis

```
766 _Unwind_Ptr _Unwind_GetLanguageSpecificData((struct _Unwind_Context *context), uint  
767 value);
```

Description

768 `_Unwind_GetLanguageSpecificData` returns the address of the language specific data area for the current stack
769 frame.

`_Unwind_GetRegionStart`

Name

770 `_Unwind_GetRegionStart` — private C++ error handling method

Synopsis

```
771 _Unwind_Ptr _Unwind_GetRegionStart((struct _Unwind_Context *context));
```

Description

772 `_Unwind_GetRegionStart` routine returns the address (i.e., 0) of the beginning of the procedure or code fragment
773 described by the current unwind descriptor block.

`_Unwind_GetTextRelBase`

Name

774 `_Unwind_GetTextRelBase` — private IA64 C++ error handling method

Synopsis

```
775 _Unwind_Ptr _Unwind_GetTextRelBase((struct _Unwind_Context *context));
```

Description

776 `_Unwind_GetTextRelBase` calls the abort method, then returns.

`_Unwind_RaiseException`

Name

777 `_Unwind_RaiseException` — private C++ error handling method

Synopsis

778 `_Unwind_Reason_Code _Unwind_RaiseException((struct _Unwind_Exception *object));`

Description

779 `_Unwind_RaiseException` raises an exception, passing along the given exception *object*, which should have its
 780 *exception_class* and *exception_cleanup* fields set. The exception object has been allocated by the
 781 language-specific runtime, and has a language-specific format, exception that it shall contain an
 782 `_Unwind_Exception`.

Return Value

783 `_Unwind_RaiseException` does not return unless an error condition is found. If an error condition occurs, an
 784 `_Unwind_Reason_Code` is returned:

785 `_URC_END_OF_STACK`

786 The unwinder encountered the end of the stack during phase one without finding a handler. The unwind runtime
 787 will not have modified the stack. The C++ runtime will normally call `uncaught_exception` in this case.

788 `_URC_FATAL_PHASE1_ERROR`

789 The unwinder encountered an unexpected error during phase one, because of something like stack corruption.
 790 The unwind runtime will not have modified the stack. The C++ runtime will normally call `terminate` in this
 791 case.

792 `_URC_FATAL_PHASE2_ERROR`

793 The unwinder encountered an unexpected error during phase two. This is usually a *throw*, which will call
 794 `terminate`.

`_Unwind_Resume`

Name

795 `_Unwind_Resume` — private C++ error handling method

Synopsis

796 `void _Unwind_Resume((struct _Unwind_Exception *object));`

Description

797 `_Unwind_Resume` resumes propagation of an existing exception *object*. A call to this routine is inserted as the end
798 of a landing pad that performs cleanup, but does not resume normal execution. It causes unwinding to proceed further.

`_Unwind_SetGR`

Name

799 `_Unwind_SetGR` — private C++ error handling method

Synopsis

800 `void _Unwind_SetGR((struct _Unwind_Context *context), int index, uint value);`

Description

801 `_Unwind_SetGR` sets the *value* of the register *indexed* for the routine identified by the unwind *context*.

`_Unwind_SetIP`

Name

802 `_Unwind_SetIP` — private C++ error handling method

Synopsis

803 `void _Unwind_SetIP((struct _Unwind_Context *context), uint value);`

Description

804 `_Unwind_SetIP` sets the *value* of the instruction pointer for the routine identified by the unwind *context*

1.8. Interfaces for libdl

805 Table 1-35 defines the library name and shared object name for the libdl library

806 **Table 1-35. libdl Definition**

Library:	libdl
SONAME:	libdl.so.2

808 The behavior of the interfaces in this library is specified by the following specifications:

809 ~~Linux Standard Base~~this specification
~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

1.8.1. Dynamic Loader

810 1.8.1.1. Interfaces for Dynamic Loader

811 An LSB conforming implementation shall provide the architecture specific functions for Dynamic Loader specified in
 812 Table 1-36, with the full functionality as described in the referenced underlying specification.

813 **Table 1-36. libdl - Dynamic Loader Function Interfaces**

dldaddr(GLIBC_2.2.5) dldaddr(GLIBC_2.5) [1]	dldclose(GLIBC_2.2.5) dldclose(GLIBC_2.2.5) [2]	dlderror(GLIBC_2.2.5) dlderror(GLIBC_2.2.5) [2]	dldopen(GLIBC_2.2.5) dldopen(GLIBC_2.2.5) [1]	dldsym(GLIBC_2.2.5) dldsym(GLIBC_2.2.5) [1]
--	--	--	--	--

815 *Referenced Specification(s)*

816 [1]. ~~Linux Standard Base~~this specification

817 [2]. ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

1.9. Interfaces for libcrypt

819 Table 1-37 defines the library name and shared object name for the libcrypt library

820 **Table 1-37. libcrypt Definition**

Library:	libcrypt
SONAME:	libcrypt.so.1

822 The behavior of the interfaces in this library is specified by the following specifications:

823 ~~ISO/IEC 9945: POSIX (2003 Portable Operating System (POSIX) and The Single UNIX® Specification (SUS) V3)~~

1.9.1. Encryption

824 1.9.1.1. Interfaces for Encryption

825 An LSB conforming implementation shall provide the architecture specific functions for Encryption specified in Table
 826 1-38, with the full functionality as described in the referenced underlying specification.

827 **Table 1-38. libcrypt - Encryption Function Interfaces**

828	crypt(GLIBC_2.2.5) crypt(GLIBC_2.2.5) [1]	encrypt(GLIBC_2.2.5) encrypt(GLIBC_2.2.5) [1]	setkey(GLIBC_2.2.5) setkey(GLIBC_2.2.5) [1]		
-----	---	--	--	--	--

829 *Referenced Specification(s)*

830 [1]. ISO/IEC 9945: POSIX (2003-Portable Operating System(POSIX)and The Single UNIX® Specification(SUS)
831 V3)

II. Utility Libraries

Chapter 2. Libraries

The Utility libraries are those that are commonly used, but not part of the Single Unix Specification.

An LSB-conforming implementation shall also support some utility libraries which are built on top of the interfaces provided by the base libraries. These libraries implement common functionality, and hide additional system dependent information such as file formats and device names.

2.1. Interfaces for libz

Table 2-1 defines the library name and shared object name for the libz library

Table 2-1. libz Definition

Library:	libz
SONAME:	libz.so.1

2.1.1. Compression Library

2.1.1.1. Interfaces for Compression Library

No external functions are defined for libz - Compression Library

2.2. Interfaces for libncurses

Table 2-2 defines the library name and shared object name for the libncurses library

Table 2-2. libncurses Definition

Library:	libncurses
SONAME:	libncurses.so.5

2.2.1. Curses

2.2.1.1. Interfaces for Curses

No external functions are defined for libncurses - Curses

2.3. Interfaces for libutil

Table 2-3 defines the library name and shared object name for the libutil library

Table 2-3. libutil Definition

Library:	libutil
----------	---------

SONAME:	libutil.so.1
---------	--------------

The behavior of the interfaces in this library is specified by the following specifications:

~~Linux Standard Base~~this specification

2.3.1. Utility Functions

2.3.1.1. Interfaces for Utility Functions

An LSB conforming implementation shall provide the architecture specific functions for Utility Functions specified in Table 2-4, with the full functionality as described in the referenced underlying specification.

Table 2-4. libutil - Utility Functions Function Interfaces

forkpty(GLIBC_2.2.5) forkpty(GLIBC_2.2.5) [1]	login_tty(GLIBC_2.5) login_tty(GLIBC_2.2.5) [1]	logwtmp(GLIBC_2.5) logwtmp(GLIBC_2.2.5) [1]		
login(GLIBC_2.2.5) login(GLIBC_2.2.5) [1]	logout(GLIBC_2.5) logout(GLIBC_2.2.5) [1]	openpty(GLIBC_2.5) openpty(GLIBC_2.2.5) [1]		

Referenced Specification(s)

[1]. ~~Linux Standard Base~~this specification

Appendix A. Alphabetical Listing of Interfaces

A.1. libgcc_s

1 The behaviour of the interfaces in this library is specified by the following Standards.

2 | ~~Linux Standard Base~~this specification

3 **Table A-1. libgcc_s Function Interfaces**

_Unwind_DeleteException[1]	_Unwind_GetIP_Unwind_GetIP[1]	_Unwind_Resume_Unwind_Resume[1]
_Unwind_Find_FDE_Unwind_Find_FDE[1]	_Unwind_GetLanguageSpecificData[1]	_Unwind_SetGR_Unwind_SetGR[1]
_Unwind_ForcedUnwind_Unwind_ForcedUnwind[1]	_Unwind_GetRegionStart[1]	_Unwind_SetIP_Unwind_SetIP[1]
_Unwind_GetDataRelBase[1]	_Unwind_GetTextRelBase[1]	
_Unwind_GetGR_Unwind_GetGR[1]	_Unwind_RaiseException[1]	

4

Linux Packaging Specification

2

3 **Linux Packaging Specification**

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I. Package Format and Installation

Chapter 1. Software Installation

1.1. Package Dependencies

- 1 The LSB runtime environment shall provide the following dependencies.
- 2 `lsb-core-amd64`
 - 3 This dependency is used to indicate that the application is dependent on features contained in the LSB-Core
 - 4 specification.
- 5 Other LSB modules may add additional dependencies; such dependencies shall have the format `lsb-module-amd64`.

1.2. Package Architecture Considerations

- 6 All packages must specify an architecture of `x86_64`. An LSB runtime environment must accept an architecture of
- 7 `x86_64` even if the native architecture is different.
- 8 The `archnum` value in the Lead Section shall be `0x0001`.

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