

Linux Standard Base Core Specification for IA32 4.1

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ISO/IEC 23360 Part 2:2010(E)

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Foreword

This is version 4.1 of the Linux Standard Base Core Specification for IA32. This specification is one of a series of volumes under the collective title *Linux Standard Base*:

- Core
- C++
- Desktop
- Languages
- Printing

Note that the Core, C++ and Desktop volumes consist of a generic volume augmented by an architecture-specific volume.

Status of this Document

This is a released specification. Other documents may supersede or augment this specification. A list of current Linux Standard Base (LSB) specifications is available at <http://refspecs.linuxfoundation.org> (<http://refspecs.linuxfoundation.org/>).

If you wish to make comments regarding this document in a manner that is tracked by the LSB project, please submit them using our public bug database at <http://bugs.linuxbase.org>. Please enter your feedback, carefully indicating the title of the section for which you are submitting feedback, and the volume and version of the specification where you found the problem, quoting the incorrect text if appropriate. If you are suggesting a new feature, please indicate what the problem you are trying to solve is. That is more important than the solution, in fact.

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Introduction

The LSB defines a binary interface for application programs that are compiled and packaged for LSB-conforming implementations on many different hardware architectures. A binary specification must include information specific to the computer processor architecture for which it is intended. To avoid the complexity of conditional descriptions, the specification has instead been divided into generic parts which are augmented by one of several architecture-specific parts, depending on the target processor architecture; the generic part will indicate when reference must be made to the architecture part, and vice versa.

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

The specification carries a version number of either the form $x.y$ or $x.y.z$. This version number carries the following meaning:

1. The first number (x) is the major version number. Versions sharing the same major version number shall be compatible in a backwards direction; that is, a newer version shall be compatible with an older version. Any deletion of a library results in a new major version number. Interfaces marked as deprecated may be removed from the specification at a major version change.
2. The second number (y) is the minor version number. Libraries and individual interfaces may be added, but not removed. Interfaces may be marked as deprecated at a minor version change. Other minor changes may be permitted at the discretion of the LSB workgroup.
3. The third number (z), if present, is the editorial level. Only editorial changes should be included in such versions.

Since this specification is a descriptive Application Binary Interface, and not a source level API specification, it is not possible to make a guarantee of 100% backward compatibility between major releases. However, it is the intent that those parts of the binary interface that are visible in the source level API will remain backward compatible from version to version, except where a feature marked as "Deprecated" in one release may be removed from a future release. Implementors are strongly encouraged to make use of symbol versioning to permit simultaneous support of applications conforming to different releases of this specification.

LSB is a trademark of the Linux Foundation. Developers of applications or implementations interested in using the trademark should see the Linux Foundation Certification Policy for details.

I Introductory Elements

1 Scope

1.1 General

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

These specifications are composed of two basic parts: A common specification ("LSB-generic" or "generic LSB"), ISO/IEC 23360 Part 1, describing those parts of the interface that remain constant across all implementations of the LSB, and an architecture-specific part ("LSB-arch") describing the parts of the interface that vary by processor architecture. Together, the LSB-generic and the relevant architecture-specific part of ISO/IEC 23360 for a single hardware architecture provide a complete interface specification for compiled application programs on systems that share a common hardware architecture.

ISO/IEC 23360 Part 1, the LSB-generic document, should be used in conjunction with an architecture-specific part. Whenever a section of the LSB-generic specification is supplemented by architecture-specific information, the LSB-generic document includes a reference to the architecture part. Architecture-specific parts of ISO/IEC 23360 may also contain additional information that is not referenced in the LSB-generic document.

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

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

1.2 Module Specific Scope

This is the IA32 architecture specific Core part of the Linux Standard Base (LSB). This part supplements the generic LSB Core module with those interfaces that differ between architectures.

Interfaces described in this part of ISO/IEC 23360 are mandatory except where explicitly listed otherwise. Core interfaces may be supplemented by other modules; all modules are built upon the core.

2 References

2.1 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Note: Where copies of a document are available on the World Wide Web, a Uniform Resource Locator (URL) is given for informative purposes only. This may point to a more recent copy of the referenced specification, or may be out of date. Reference copies of specifications at the revision level indicated may be found at the Linux Foundation's Reference Specifications (<http://refspecs.freestdards.org>) site.

Table 2-1 Normative References

Name	Title	URL
ISO/IEC 23360 Part 1	ISO/IEC 23360:2005 Linux Standard Base - Part 1 Generic Specification	http://www.linuxbase.org/spec/
Filesystem Hierarchy Standard	Filesystem Hierarchy Standard (FHS) 2.3	http://www.pathname.com/fhs/
Intel® Architecture Software Developer's Manual Volume 1	The IA-32 Intel® Architecture Software Developer's Manual Volume 1: Basic Architecture	http://developer.intel.com/design/pentium4/manuals/245470.htm
Intel® Architecture Software Developer's Manual Volume 2	The IA-32 Intel® Architecture Software Developer's Manual Volume 2: Instruction Set Reference	http://developer.intel.com/design/pentium4/manuals/245471.htm
Intel® Architecture Software Developer's Manual Volume 3	The IA-32 Intel® Architecture Software Developer's Manual Volume 3: System Programming Guide	http://developer.intel.com/design/pentium4/manuals/245472.htm
ISO C (1999)	ISO/IEC 9899: 1999, Programming Languages --C	
Large File Support	Large File Support	http://www.UNIX-systems.org/version2/whatsnew/lfs20mar.html
POSIX 1003.1-2001 (ISO/IEC 9945-2003)	ISO/IEC 9945-1:2003 Information technology -- Portable Operating	http://www.unix.org/version3/

Name	Title	URL
	<p>System Interface (POSIX) -- Part 1: Base Definitions</p> <p>ISO/IEC 9945-2:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 2: System Interfaces</p> <p>ISO/IEC 9945-3:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 3: Shell and Utilities</p> <p>ISO/IEC 9945-4:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 4: Rationale</p> <p>Including Technical Cor. 1: 2004</p>	
POSIX 1003.1-2008 (ISO/IEC 9945-2009)	Portable Operating System Interface (POSIX®) 2008 Edition / The Open Group Technical Standard Base Specifications, Issue 7	http://www.unix.org/version4/
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
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	http://refspecs.linuxfoundation.org/svid4/
System V ABI	System V Application Binary Interface,	http://www.sco.com/developers/devspecs/g

Name	Title	URL
	Edition 4.1	abi41.pdf
System V ABI Update	System V Application Binary Interface - DRAFT - 17 December 2003	http://www.sco.com/developers/gabi/2003-12-17/contents.html
System V ABI, IA32 Supplement	System V Application Binary Interface - Intel386 Architecture Processor Supplement, Fourth Edition	http://www.sco.com/developers/devspecs/abi386-4.pdf
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

2.2 Informative References/Bibliography

In addition, the specifications listed below provide essential background information to implementors of this specification. These references are included for information only.

Table 2-2 Other References

Name	Title	URL
DWARF Debugging Information Format, Revision 2.0.0	DWARF Debugging Information Format, Revision 2.0.0 (July 27, 1993)	http://refspecs.linux-foundation.org/dwarf/dwarf-2.0.0.pdf
DWARF Debugging Information Format, Revision 3.0.0 (Draft)	DWARF Debugging Information Format, Revision 3.0.0 (Draft)	http://refspecs.linux-foundation.org/dwarf
IEC 60559/IEEE 754 Floating Point	IEC 60559:1989 Binary floating-point arithmetic for microprocessor systems	http://www.ieee.org/
ISO/IEC TR14652	ISO/IEC Technical Report 14652:2002 Specification method for cultural conventions	
ITU-T V.42	International Telecommunication Union Recommendation V.42 (2002): Error-correcting procedures for DCEs using asynchronous-to-synchronous	http://www.itu.int/rec/recommendation.asp?type=folders&lang=e&parent=T-REC-V.42

Name	Title	URL
	conversionITUV	
Li18nux Globalization Specification	LI18N 2000 Globalization Specification, Version 1.0 with Amendment 4	http://www.openi18n.org/docs/html/LI18N-UX-2000-amd4.htm
Linux Allocated Device Registry	LINUX ALLOCATED DEVICES	http://www.lanana.org/docs/device-list/devices.txt
Mozilla's NSS SSL Reference	Mozilla's NSS SSL Reference	http://www.mozilla.org/projects/security/pki/nss/ref/ssl/
NSPR Reference	Mozilla's NSPR Reference	http://refspecs.linuxfoundation.org/NSPR_API_Reference/NSPR_API.html
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 1831/1832 RPC & XDR	IETF RFC 1831 & 1832	http://www.ietf.org/
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 1950: ZLIB Compressed Data Format Specification	IETF RFC 1950: ZLIB Compressed Data Format Specification	http://www.ietf.org/rfc/rfc1950.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
RFC 2821: Simple Mail Transfer Protocol	IETF RFC 2821: Simple Mail Transfer Protocol	http://www.ietf.org/rfc/rfc2821.txt
RFC 2822: Internet	IETF RFC 2822: Internet	http://www.ietf.org/rfc

Name	Title	URL
Message Format	Message Format	c/rfc2822.txt
RFC 791:Internet Protocol	IETF RFC 791: Internet Protocol Specification	http://www.ietf.org/rfc/rfc791.txt
RPM Package Format	RPM Package Format V3.0	http://www.rpm.org/max-rpm/s1-rpm-file-format-rpm-file-format.html
SUSv2 Commands 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
zlib Manual	zlib 1.2 Manual	http://www.gzip.org/zlib/

3 Requirements

3.1 Relevant Libraries

The libraries listed in Table 3-1 shall be available on IA32 Linux Standard Base systems, with the specified runtime names. These names override or supplement the names specified in the generic LSB (ISO/IEC 23360 Part 1) specification. The specified program interpreter, referred to as `proginterp` in this table, shall be used to load the shared libraries specified by `DT_NEEDED` entries at run time.

Table 3-1 Standard Library Names

Library	Runtime Name
libm	libm.so.6
libdl	libdl.so.2
libcrypt	libcrypt.so.1
libz	libz.so.1
libncurses	libncurses.so.5
libutil	libutil.so.1
libc	libc.so.6
libpthread	libpthread.so.0
proginterp	/lib/ld-lsb.so.3
libgcc_s	libgcc_s.so.1

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

3.2 LSB Implementation Conformance

A conforming implementation is necessarily architecture specific, and must provide the interfaces specified by both the generic LSB Core specification (ISO/IEC 23360 Part 1) and the relevant architecture specific part of ISO/IEC 23360.

Rationale: An implementation must provide *at least* the interfaces specified in these specifications. It may also provide additional interfaces.

A conforming implementation shall satisfy the following requirements:

- A processor architecture represents a family of related processors which may not have identical feature sets. The architecture specific parts of ISO/IEC 23360 that supplement this specification for a given target processor architecture describe a minimum acceptable processor. The implementation shall provide all features of this processor, whether in hardware or through emulation transparent to the application.
- The implementation shall be capable of executing compiled applications having the format and using the system interfaces described in this document.

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

3.3 LSB Application Conformance

A conforming application is necessarily architecture specific, and must conform to both the generic LSB Core specification (ISO/IEC 23360 Part 1) and the relevant architecture specific part of ISO/IEC 23360.

A conforming application shall satisfy the following requirements:

- Its executable files shall be either shell scripts or object files in the format defined for the Object File Format system interface.
- Its object files shall participate in dynamic linking as defined in the Program Loading and Linking System interface.
- It shall employ only the instructions, traps, and other low-level facilities defined in the Low-Level System interface as being for use by applications.
- If it requires any optional interface defined in this document in order to be installed or to execute successfully, the requirement for that optional interface shall be stated in the application's documentation.
- It shall not use any interface or data format that is not required to be provided by a conforming implementation, unless:

- If such an interface or data format is supplied by another application through direct invocation of that application during execution, that application shall be in turn an LSB conforming application.
- The use of that interface or data format, as well as its source, shall be identified in the documentation of the application.
- It shall not use any values for a named interface that are reserved for vendor extensions.

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

4 Terms and Definitions

For the purposes of this document, the terms given in *ISO/IEC Directives, Part 2, Annex H* and the following apply.

archLSB

Some LSB specification documents have both a generic, architecture-neutral part and an architecture-specific part. The latter describes elements whose definitions may be unique to a particular processor architecture. The term archLSB may be used in the generic part to refer to the corresponding section of the architecture-specific part.

Binary Standard, ABI

The total set of interfaces that are available to be used in the compiled binary code of a conforming application, including the run-time details such as calling conventions, binary format, C++ name mangling, etc.

Implementation-defined

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

Shell Script

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

Source Standard, API

The total set of interfaces that are available to be used in the source code of a conforming application. Due to translations, the Binary Standard and the Source Standard may contain some different interfaces.

Undefined

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

Unspecified

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

In addition, for the portions of this specification which build on IEEE Std 1003.1-2001, the definitions given in *IEEE Std 1003.1-2001, Base Definitions, Chapter 3* apply.

5 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) [SUSv3]

refers to the interface named `forkpty()` with symbol version `GLIBC_2.0` that is defined in the `SUSv3` reference.

Note: For symbols with versions which differ between architectures, the symbol versions are defined in the architecture specific parts of ISO/IEC 23360 only.

II Executable and Linking Format (ELF)

6 Introduction

Executable and Linking Format (ELF) defines the object format for compiled applications. This specification supplements the information found in System V ABI Update and System V ABI, IA32 Supplement, and is intended to document additions made since the publication of that document.

7 Low Level System Information

7.1 Machine Interface

7.1.1 Processor Architecture

The IA32 Architecture is specified by the following documents

- Intel® Architecture Software Developer's Manual Volume 1
- Intel® Architecture Software Developer's Manual Volume 2
- Intel® Architecture Software Developer's Manual Volume 3

Only the features of the Intel486 processor instruction set may be assumed to be present. An application should determine if any additional instruction set features are available before using those additional features. If a feature is not present, then a conforming application shall not use it.

Conforming applications may use only instructions which do not require elevated privileges.

Conforming applications shall not invoke the implementations underlying system call interface directly. The interfaces in the implementation base libraries shall be used instead.

Rationale: Implementation-supplied base libraries may use the system call interface but applications must not assume any particular operating system or kernel version is present.

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

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

7.1.2 Data Representation

LSB-conforming applications shall use the data representation as defined in Chapter 3 of the System V ABI, IA32 Supplement.

7.1.2.1 Byte Ordering

LSB-conforming systems and applications shall use the bit and byte ordering rules specified in Section 1.3.1 of the Intel® Architecture Software Developer's Manual Volume 1.

7.1.2.2 Fundamental Types

In addition to the fundamental types specified in Chapter 3 of the System V ABI, IA32 Supplement, a 64 bit data type is defined here.

Table 7-1 Scalar Types

Type	C	sizeof	Alignment (bytes)	Intel386 Architecture
Integral	long long	8	4	signed dou-

Type	C	sizeof	Alignment (bytes)	Intel386 Architecture
				ble word
	signed long long			
	unsigned long long	8	4	unsigned double word

7.1.2.3 Aggregates and Unions

LSB-conforming implementations shall support aggregates and unions with alignment and padding as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.1.2.4 Bit Fields

LSB-conforming implementations shall support structure and union definitions that include bit-fields as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2 Function Calling Sequence

LSB-conforming applications shall use the function calling sequence as defined in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.1 Registers

LSB-conforming applications shall use the general registers provided by the architecture in the manner described in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.2 Floating Point Registers

LSB-conforming applications shall use the floating point registers provided by the architecture in the manner described in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.3 Stack Frame

LSB-conforming applications shall use the stack frame in the manner specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.4 Arguments

7.2.4.1 Integral/Pointer

Integral and pointer arguments to functions shall be passed as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.4.2 Floating Point

Floating point arguments to functions shall be passed as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.4.3 Struct and Union Arguments

Structure and union arguments to functions shall be passed as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.4.4 Variable Arguments

As described in Chapter 3 of the System V ABI, IA32 Supplement, LSB-conforming applications using variable argument lists shall use the facilities defined in the header file `<stdarg.h>` to deal with variable argument lists.

Note: This is a requirement of ISO C (1999) and POSIX 1003.1-2001 (ISO/IEC 9945-2003) as well as System V ABI, IA32 Supplement.

7.2.5 Return Values

7.2.5.1 Void

As described in chapter 3 of System V ABI, IA32 Supplement, functions returning no value need not set any register to any particular value.

7.2.5.2 Integral/Pointer

Functions return scalar values (integer or pointer), shall do so as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.5.3 Floating Point

Functions return floating point values shall do so as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.2.5.4 Struct and Union

Functions that return a structure or union shall do so as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.3 Operating System Interface

LSB-conforming applications shall use the following aspects of the Operating System Interfaces as defined in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.1 Virtual Address Space

LSB-conforming implementations shall support the virtual address space described in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.1.1 Page Size

LSB-conforming applications should call `sysconf()` to determine the current page size. See also Chapter 3 of the System V ABI, IA32 Supplement.

7.3.1.2 Virtual Address Assignments

LSB-conforming systems shall provide the virtual address space configuration as described in Chapter 3 of the System V ABI, IA32 Supplement (Virtual Address Assignments).

7.3.1.3 Managing the Process Stack

LSB-conforming systems shall manage the process stack as specified in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.1.4 Coding Guidelines

LSB-conforming applications should follow the coding guidelines provided in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.2 Processor Execution Mode

LSB-conforming applications shall run in the user-mode ring as described in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.3 Exception Interface

7.3.3.1 Introduction

LSB-conforming system shall provide the exception interface described in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.3.2 Hardware Exception Types

LSB-conforming systems shall map hardware exceptions to signals as described in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.3.3 Software Trap Types

Software generated traps are subject to the limitations described in Chapter 3 of the System V ABI, IA32 Supplement.

7.3.4 Signal Delivery

There are no architecture specific requirements for signal delivery.

7.3.4.1 Signal Handler Interface

There are no architecture specific requirements for the signal handler interface.

7.4 Process Initialization

An LSB-conforming implementation shall cause an application to be initialized as described in the Process Initialization section of Chapter 3 of the System V ABI, IA32 Supplement, and as described below.

7.4.1 Special Registers

The special registers shall be initialized as described in Chapter 3 of the System V ABI, IA32 Supplement.

7.4.2 Process Stack (on entry)

The process stack shall be initialized as described in Chapter 3 of the System V ABI, IA32 Supplement.

7.4.3 Auxilliary Vector

The auxilliary vector shall be initialized as described in Chapter 3 of the System V ABI, IA32 Supplement.

7.4.4 Environment

There are no architecture specific requirements for environment initialization.

7.5 Coding Examples

7.5.1 Introduction

LSB-conforming applications may follow the coding examples provided in chapter 3 of the System V ABI, IA32 Supplement in order to implement certain fundamental operations.

7.5.2 Code Model Overview/Architecture Constraints

Chapter 3 of the System V ABI, IA32 Supplement provides an overview of the code model.

7.5.3 Position-Independent Function Prologue

LSB-conforming applications using position independent functions may use the techniques described in Chapter 3 of the System V ABI, IA32 Supplement.

7.5.4 Data Objects

LSB-conforming applications accessing non-stack resident data objects may do so as described in Chapter 3 of the System V ABI, IA32 Supplement, including both absolute and position independent data access techniques.

7.5.5 Function Calls

7.5.5.1 Absolute Direct Function Call

LSB-conforming applications using direct function calls with absolute addressing may follow the examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.5.5.2 Absolute Indirect Function Call

LSB-conforming applications using indirect function calls with absolute addressing may follow the examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.5.5.3 Position-Independent Direct Function Call

LSB-conforming applications using direct function calls with position independent addressing may follow the examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.5.5.4 Position-Independent Indirect Function Call

LSB-conforming applications using indirect function calls with position independent addressing may follow the examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.5.6 Branching

LSB-conforming applications may follow the branching examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.6 C Stack Frame

7.6.1 Variable Argument List

As described in Chapter 3 of the System V ABI, IA32 Supplement, LSB-conforming applications using variable argument lists shall use the facilities defined in the header file `<stdarg.h>` to deal with variable argument lists.

Note: This is a requirement of ISO C (1999) and POSIX 1003.1-2001 (ISO/IEC 9945-2003) as well as System V ABI, IA32 Supplement.

7.6.2 Dynamic Allocation of Stack Space

LSB-conforming applications may allocate space using the stack following the examples given in Chapter 3 of the System V ABI, IA32 Supplement.

7.7 Debug Information

There are no architecture specific requirements for debugging information for this architecture. LSB-conforming applications may utilize DWARF sections as described in the generic specification.

8 Object Format

8.1 Introduction

LSB-conforming implementations shall support an object file format, called Executable and Linking Format (ELF) as defined by the System V ABI, System V ABI Update, System V ABI, IA32 Supplement and as supplemented by the ISO/IEC 23360 Part 1 and the generic LSB specification.

8.2 ELF Header

8.2.1 Machine Information

LSB-conforming applications shall use the Machine Information as defined in Chapter 4 of the System V ABI, IA32 Supplement, including the *e_ident* array members for *EI_CLASS* and *EI_DATA*, the processor identification in *e_machine* and flags in *e_flags*. The operating system identification field, in *e_ident[EI_OSABI]* shall be *ELFOSABI_NONE* (0).

8.3 Special Sections

8.3.1 Special Sections

Various sections hold program and control information. Sections in the lists below are used by the system and have the indicated types and attributes.

8.3.1.1 ELF Special Sections

The following sections are defined in Chapter 4 of the System V ABI, IA32 Supplement.

Table 8-1 ELF Special Sections

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

.got

This section holds the global offset table. See 'Coding Examples' in Chapter 3, 'Special Sections' in Chapter 4, and 'Global Offset Table' in Chapter 5 of the processor supplement for more information.

.plt

This section holds the procedure linkage table.

8.3.1.2 Additional Special Sections

The following additional sections are defined here.

Table 8-2 Additional Special Sections

Name	Type	Attributes
------	------	------------

Name	Type	Attributes
.rel.dyn	SHT_REL	SHF_ALLOC

.rel.dyn

This section holds relocation information, as described in 'Relocation' section in Chapter 4 of System V ABI Update. These relocations are applied to the .dyn section.

8.4 Symbol Table

LSB-conforming applications shall use the Symbol Table section as defined in Chapter 4 of the System V ABI, IA32 Supplement.

8.5 Relocation

8.5.1 Introduction

LSB-conforming implementations shall support Relocation as defined in Chapter 4 of the System V ABI, IA32 Supplement and as described below.

8.5.2 Relocation Types

The relocation types described in Chapter 4 of the System V ABI, IA32 Supplement shall be supported.

9 Program Loading and Dynamic Linking

9.1 Introduction

LSB-conforming implementations shall support the object file information and system actions that create running programs as specified in the System V ABI , System V ABI Update , System V ABI, IA32 Supplement and as supplemented by ISO/IEC 23360 Part 1 and the generic LSB specification.

9.2 Program Header

9.2.1 Introduction

As described in System V ABI Update, the program header is an array of structures, each describing a segment or other information the system needs to prepare the program for execution.

9.2.2 Types

The IA32 architecture does not define any additional program header types beyond those required in the generic LSB Core specification.

9.2.3 Flags

The IA32 architecture does not define any additional program header flags beyond those required in the generic LSB Core specification.

9.3 Program Loading

LSB-conforming systems shall support program loading as defined in Chapter 5 of the System V ABI, IA32 Supplement.

9.4 Dynamic Linking

LSB-conforming systems shall support dynamic linking as defined in Chapter 5 of the System V ABI, IA32 Supplement.

9.4.1 Dynamic Section

The following dynamic entries are defined in the System V ABI, IA32 Supplement.

DT_PLTGOT

On the Intel386 architecture, this entry's `d_ptr` member gives the address of the first entry in the global offset table.

9.4.2 Global Offset Table

LSB-conforming implementations shall support use of the global offset table as described in Chapter 5 of the System V ABI, IA32 Supplement.

9.4.3 Shared Object Dependencies

There are no architecture specific requirements for shared object dependencies; see the generic LSB-Core specification.

9.4.4 Function Addresses

Function addresses shall behave as specified in Chapter 5 of the System V ABI, IA32 Supplement.

9.4.5 Procedure Linkage Table

LSB-conforming implementations shall support a Procedure Linkage Table as described in Chapter 5 of the System V ABI, IA32 Supplement.

9.4.6 Initialization and Termination Functions

There are no architecture specific requirements for initialization and termination functions; see the generic LSB-Core specification.

III Base Libraries

10 Libraries

An LSB-conforming implementation shall support some base libraries which provide interfaces for accessing the operating system, processor and other hardware in the system.

Interfaces that are unique to the IA32 platform are defined here. This section should be used in conjunction with the corresponding section in the Linux Standard Base Specification.

10.1 Program Interpreter/Dynamic Linker

The Program Interpreter shall be `/lib/ld-lsb.so.3`.

10.2 Interfaces for libc

Table 10-1 defines the library name and shared object name for the libc library

Table 10-1 libc Definition

Library:	libc
SONAME:	libc.so.6

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

[LFS] Large File Support
 [LSB] ISO/IEC 23360 Part 1
 [RPC & XDR] RFC 1831/1832 RPC & XDR
 [SUSv2] SUSv2
 [SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)
 [SUSv4] POSIX 1003.1-2008 (ISO/IEC 9945-2009)
 [SVID.4] SVID Issue 4

10.2.1 RPC

10.2.1.1 Interfaces for RPC

An LSB conforming implementation shall provide the architecture specific functions for RPC specified in Table 10-2, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-2 libc - RPC Function Interfaces

authnone_create(GLIBC_2.0) [SVID.4]	callrpc(GLIBC_2.0) [RPC & XDR]	clnt_create(GLIBC_2.0) [SVID.4]	clnt_pcreateerror(GLIBC_2.0) [SVID.4]
clnt_pererrno(GLIBC_2.0) [SVID.4]	clnt_perror(GLIBC_2.0) [SVID.4]	clnt_spccreateerror(GLIBC_2.0) [SVID.4]	clnt_sperrno(GLIBC_2.0) [SVID.4]
clnt_sperror(GLIBC_2.0) [SVID.4]	clntraw_create(GLIBC_2.0) [RPC & XDR]	clnttcp_create(GLIBC_2.0) [RPC & XDR]	clntudp_bufcreate(GLIBC_2.0) [RPC & XDR]
clntudp_create(GLIBC_2.0) [RPC]	key_decryptsession(GLIBC_2.1)	pmap_getport(GLIBC_2.0) [LSB]	pmap_set(GLIBC_2.0) [LSB]

& XDR]	[SVID.4]		
pmap_unset(GLIBC_2.0) [LSB]	svc_getreqset(GLIBC_2.0) [SVID.4]	svc_register(GLIBC_2.0) [LSB]	svc_run(GLIBC_2.0) [LSB]
svc_sendreply(GLIBC_2.0) [LSB]	svcerr_auth(GLIBC_2.0) [SVID.4]	svcerr_decode(GLIBC_2.0) [SVID.4]	svcerr_noproc(GLIBC_2.0) [SVID.4]
svcerr_noprog(GLIBC_2.0) [SVID.4]	svcerr_progvers(GLIBC_2.0) [SVID.4]	svcerr_systemerr(GLIBC_2.0) [SVID.4]	svcerr_weakauth(GLIBC_2.0) [SVID.4]
svcf_create(GLIBC_2.0) [RPC & XDR]	svccraw_create(GLIBC_2.0) [RPC & XDR]	svctcp_create(GLIBC_2.0) [LSB]	svcudp_create(GLIBC_2.0) [LSB]
xdr_accepted_reply(GLIBC_2.0) [SVID.4]	xdr_array(GLIBC_2.0) [SVID.4]	xdr_bool(GLIBC_2.0) [SVID.4]	xdr_bytes(GLIBC_2.0) [SVID.4]
xdr_callhdr(GLIBC_2.0) [SVID.4]	xdr_callmsg(GLIBC_2.0) [SVID.4]	xdr_char(GLIBC_2.0) [SVID.4]	xdr_double(GLIBC_2.0) [SVID.4]
xdr_enum(GLIBC_2.0) [SVID.4]	xdr_float(GLIBC_2.0) [SVID.4]	xdr_free(GLIBC_2.0) [SVID.4]	xdr_int(GLIBC_2.0) [SVID.4]
xdr_long(GLIBC_2.0) [SVID.4]	xdr_opaque(GLIBC_2.0) [SVID.4]	xdr_opaque_auth(GLIBC_2.0) [SVID.4]	xdr_pointer(GLIBC_2.0) [SVID.4]
xdr_reference(GLIBC_2.0) [SVID.4]	xdr_rejected_reply(GLIBC_2.0) [SVID.4]	xdr_replymsg(GLIBC_2.0) [SVID.4]	xdr_short(GLIBC_2.0) [SVID.4]
xdr_string(GLIBC_2.0) [SVID.4]	xdr_u_char(GLIBC_2.0) [SVID.4]	xdr_u_int(GLIBC_2.0) [LSB]	xdr_u_long(GLIBC_2.0) [SVID.4]
xdr_u_short(GLIBC_2.0) [SVID.4]	xdr_union(GLIBC_2.0) [SVID.4]	xdr_vector(GLIBC_2.0) [SVID.4]	xdr_void(GLIBC_2.0) [SVID.4]
xdr_wrapstring(GLIBC_2.0) [SVID.4]	xdrmem_create(GLIBC_2.0) [SVID.4]	xdrrec_create(GLIBC_2.0) [SVID.4]	xdrrec_endofrecord(GLIBC_2.0) [RPC & XDR]
xdrrec_eof(GLIBC_2.0) [SVID.4]	xdrrec_skiprecord(GLIBC_2.0) [RPC & XDR]	xdrstdio_create(GLIBC_2.0) [LSB]	

An LSB conforming implementation shall provide the architecture specific deprecated functions for RPC specified in Table 10-3, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-3 libc - RPC Deprecated Function Interfaces

key_decryptsession(GLIBC_2.1)			
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[SVID.4]			
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10.2.2 Epoll

10.2.2.1 Interfaces for Epoll

No external functions are defined for libc - Epoll in this part of the specification. See also the generic specification.

10.2.3 System Calls

10.2.3.1 Interfaces for System Calls

An LSB conforming implementation shall provide the architecture specific functions for System Calls specified in Table 10-4, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-4 libc - System Calls Function Interfaces

__fxstat(GLIBC_2.0) [LSB]	__getpgid(GLIBC_2.0) [LSB]	__lxstat(GLIBC_2.0) [LSB]	__xmknod(GLIBC_2.0) [LSB]
__xstat(GLIBC_2.0) [LSB]	access(GLIBC_2.0) [SUSv3]	acct(GLIBC_2.0) [LSB]	alarm(GLIBC_2.0) [SUSv3]
backtrace(GLIBC_2.1) [LSB]	backtrace_symbols(GLIBC_2.1) [LSB]	backtrace_symbols_fd(GLIBC_2.1) [LSB]	brk(GLIBC_2.0) [SUSv2]
chdir(GLIBC_2.0) [SUSv3]	chmod(GLIBC_2.0) [SUSv3]	chown(GLIBC_2.1) [SUSv3]	chroot(GLIBC_2.0) [SUSv2]
clock(GLIBC_2.0) [SUSv3]	close(GLIBC_2.0) [SUSv3]	closedir(GLIBC_2.0) [SUSv3]	creat(GLIBC_2.0) [SUSv3]
dup(GLIBC_2.0) [SUSv3]	dup2(GLIBC_2.0) [SUSv3]	execl(GLIBC_2.0) [SUSv3]	execle(GLIBC_2.0) [SUSv3]
execlp(GLIBC_2.0) [SUSv3]	execv(GLIBC_2.0) [SUSv3]	execve(GLIBC_2.0) [SUSv3]	execvp(GLIBC_2.0) [SUSv3]
exit(GLIBC_2.0) [SUSv3]	fchdir(GLIBC_2.0) [SUSv3]	fchmod(GLIBC_2.0) [SUSv3]	fchown(GLIBC_2.0) [SUSv3]
fcntl(GLIBC_2.0) [LSB]	fdatasync(GLIBC_2.0) [SUSv3]	fexecve(GLIBC_2.0) [SUSv4]	flock(GLIBC_2.0) [LSB]
fork(GLIBC_2.0) [SUSv3]	fstatfs(GLIBC_2.0) [LSB]	fstatvfs(GLIBC_2.1) [SUSv3]	fsync(GLIBC_2.0) [SUSv3]
ftruncate(GLIBC_2.0) [SUSv3]	ftruncate(GLIBC_2.0) [SUSv3]	getcontext(GLIBC_2.1) [SUSv3]	getdtablesize(GLIBC_2.0) [LSB]
getegid(GLIBC_2.0) [SUSv3]	geteuid(GLIBC_2.0) [SUSv3]	getgid(GLIBC_2.0) [SUSv3]	getgroups(GLIBC_2.0) [SUSv3]
getitimer(GLIBC_2.0) [SUSv3]	getloadavg(GLIBC_2.2) [LSB]	getpagesize(GLIBC_2.0) [LSB]	getpgid(GLIBC_2.0) [SUSv3]
getpgrp(GLIBC_2.0) [SUSv3]	getpid(GLIBC_2.0) [SUSv3]	getppid(GLIBC_2.0) [SUSv3]	getpriority(GLIBC_2.0) [SUSv3]

getrlimit(GLIBC_2.2) [SUSv3]	getrusage(GLIBC_2.0) [SUSv3]	getsid(GLIBC_2.0) [SUSv3]	getuid(GLIBC_2.0) [SUSv3]
getwd(GLIBC_2.0) [SUSv3]	initgroups(GLIBC_2.0) [LSB]	ioctl(GLIBC_2.0) [LSB]	kill(GLIBC_2.0) [LSB]
killpg(GLIBC_2.0) [SUSv3]	lchown(GLIBC_2.0) [SUSv3]	link(GLIBC_2.0) [LSB]	lockf(GLIBC_2.0) [SUSv3]
lseek(GLIBC_2.0) [SUSv3]	mkdir(GLIBC_2.0) [SUSv3]	mkfifo(GLIBC_2.0) [SUSv3]	mlock(GLIBC_2.0) [SUSv3]
mlockall(GLIBC_2.0) [SUSv3]	mmap(GLIBC_2.0) [SUSv3]	mprotect(GLIBC_2.0) [SUSv3]	mremap(GLIBC_2.0) [LSB]
msync(GLIBC_2.0) [SUSv3]	munlock(GLIBC_2.0) [SUSv3]	munlockall(GLIBC_2.0) [SUSv3]	munmap(GLIBC_2.0) [SUSv3]
nanosleep(GLIBC_2.0) [SUSv3]	nice(GLIBC_2.0) [SUSv3]	open(GLIBC_2.0) [SUSv3]	opendir(GLIBC_2.0) [SUSv3]
pathconf(GLIBC_2.0) [SUSv3]	pause(GLIBC_2.0) [SUSv3]	pipe(GLIBC_2.0) [SUSv3]	poll(GLIBC_2.0) [SUSv3]
pread(GLIBC_2.1) [SUSv3]	pselect(GLIBC_2.0) [SUSv3]	ptrace(GLIBC_2.0) [LSB]	pwrite(GLIBC_2.1) [SUSv3]
read(GLIBC_2.0) [SUSv3]	readdir(GLIBC_2.0) [SUSv3]	readdir_r(GLIBC_2.0) [SUSv3]	readlink(GLIBC_2.0) [SUSv3]
readv(GLIBC_2.0) [SUSv3]	rename(GLIBC_2.0) [SUSv3]	rmdir(GLIBC_2.0) [SUSv3]	sbrk(GLIBC_2.0) [SUSv2]
sched_get_priority_max(GLIBC_2.0) [SUSv3]	sched_get_priority_min(GLIBC_2.0) [SUSv3]	sched_getparam(GLIBC_2.0) [SUSv3]	sched_getscheduler(GLIBC_2.0) [SUSv3]
sched_rr_get_interval(GLIBC_2.0) [SUSv3]	sched_setparam(GLIBC_2.0) [SUSv3]	sched_setscheduler(GLIBC_2.0) [LSB]	sched_yield(GLIBC_2.0) [SUSv3]
select(GLIBC_2.0) [SUSv3]	setcontext(GLIBC_2.0) [SUSv3]	setegid(GLIBC_2.0) [SUSv3]	seteuid(GLIBC_2.0) [SUSv3]
setgid(GLIBC_2.0) [SUSv3]	setitimer(GLIBC_2.0) [SUSv3]	setpgid(GLIBC_2.0) [SUSv3]	setpgrp(GLIBC_2.0) [SUSv3]
setpriority(GLIBC_2.0) [SUSv3]	setregid(GLIBC_2.0) [SUSv3]	setreuid(GLIBC_2.0) [SUSv3]	setrlimit(GLIBC_2.2) [SUSv3]
setrlimit64(GLIBC_2.1) [LFS]	setsid(GLIBC_2.0) [SUSv3]	setuid(GLIBC_2.0) [SUSv3]	sleep(GLIBC_2.0) [SUSv3]
statfs(GLIBC_2.0) [LSB]	statvfs(GLIBC_2.1) [SUSv3]	stime(GLIBC_2.0) [LSB]	symlink(GLIBC_2.0) [SUSv3]
sync(GLIBC_2.0) [SUSv3]	sysconf(GLIBC_2.0) [LSB]	sysinfo(GLIBC_2.0) [LSB]	time(GLIBC_2.0) [SUSv3]
times(GLIBC_2.0) [SUSv3]	truncate(GLIBC_2.0) [SUSv3]	ulimit(GLIBC_2.0) [SUSv3]	umask(GLIBC_2.0) [SUSv3]
uname(GLIBC_2.0) [SUSv3]	unlink(GLIBC_2.0) [SUSv3]	utime(GLIBC_2.0) [SUSv3]	utimes(GLIBC_2.0) [SUSv3]

0) [SUSv3]	0) [LSB]	) [SUSv3]	0) [SUSv3]
vfork(GLIBC_2.0) [SUSv3]	wait(GLIBC_2.0) [SUSv3]	wait4(GLIBC_2.0) [LSB]	waitid(GLIBC_2.1) [SUSv3]
waitpid(GLIBC_2.0) [SUSv3]	write(GLIBC_2.0) [SUSv3]	writew(GLIBC_2.0) [SUSv3]	

An LSB conforming implementation shall provide the architecture specific deprecated functions for System Calls specified in Table 10-5, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-5 libc - System Calls Deprecated Function Interfaces

fstatfs(GLIBC_2.0) [LSB]	getdtablesize(GLIBC_2.0) [LSB]	getpagesize(GLIBC_2.0) [LSB]	getwd(GLIBC_2.0) [SUSv3]
statfs(GLIBC_2.0) [LSB]			

10.2.4 Standard I/O

10.2.4.1 Interfaces for Standard I/O

An LSB conforming implementation shall provide the architecture specific functions for Standard I/O specified in Table 10-6, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-6 libc - Standard I/O Function Interfaces

_IO_feof(GLIBC_2.0) [LSB]	_IO_getc(GLIBC_2.0) [LSB]	_IO_putc(GLIBC_2.0) [LSB]	_IO_puts(GLIBC_2.0) [LSB]
__fprintf_chk(GLIBC_2.3.4) [LSB]	__printf_chk(GLIBC_2.3.4) [LSB]	__snprintf_chk(GLIBC_2.3.4) [LSB]	__sprintf_chk(GLIBC_2.3.4) [LSB]
__vfprintf_chk(GLIBC_2.3.4) [LSB]	__vprintf_chk(GLIBC_2.3.4) [LSB]	__vsnprintf_chk(GLIBC_2.3.4) [LSB]	__vsprintf_chk(GLIBC_2.3.4) [LSB]
asprintf(GLIBC_2.0) [LSB]	clearerr(GLIBC_2.0) [SUSv3]	clearerr_unlocked(GLIBC_2.0) [LSB]	ctermid(GLIBC_2.0) [SUSv3]
dprintf(GLIBC_2.0) [SUSv4]	fclose(GLIBC_2.1) [SUSv3]	fdopen(GLIBC_2.1) [SUSv3]	feof(GLIBC_2.0) [SUSv3]
feof_unlocked(GLIBC_2.0) [LSB]	ferror(GLIBC_2.0) [SUSv3]	ferror_unlocked(GLIBC_2.0) [LSB]	fflush(GLIBC_2.0) [SUSv3]
fflush_unlocked(GLIBC_2.0) [LSB]	fgetc(GLIBC_2.0) [SUSv3]	fgetc_unlocked(GLIBC_2.1) [LSB]	fgetpos(GLIBC_2.2) [SUSv3]
fgets(GLIBC_2.0) [SUSv3]	fgets_unlocked(GLIBC_2.1) [LSB]	fgetwc_unlocked(GLIBC_2.2) [LSB]	fgetws_unlocked(GLIBC_2.2) [LSB]
fileno(GLIBC_2.0)	fileno_unlocked(GLIBC_2.1) [LSB]	flockfile(GLIBC_2.0) [LSB]	fopen(GLIBC_2.1) [SUSv3]

) [SUSv3]	GLIBC_2.0) [LSB]	2.0) [SUSv3]	) [SUSv3]
fprintf(GLIBC_2.0) [SUSv3]	fputc(GLIBC_2.0) [SUSv3]	fputc_unlocked(GLIBC_2.0) [LSB]	fputs(GLIBC_2.0) [SUSv3]
fputs_unlocked(GLIBC_2.1) [LSB]	fputwc_unlocked(GLIBC_2.2) [LSB]	fputws_unlocked(GLIBC_2.2) [LSB]	fread(GLIBC_2.0) [SUSv3]
fread_unlocked(GLIBC_2.1) [LSB]	freopen(GLIBC_2.0) [SUSv3]	fscanf(GLIBC_2.0) [LSB]	fseek(GLIBC_2.0) [SUSv3]
fseeko(GLIBC_2.1) [SUSv3]	fsetpos(GLIBC_2.2) [SUSv3]	ftell(GLIBC_2.0) [SUSv3]	ftello(GLIBC_2.1) [SUSv3]
fwrite(GLIBC_2.0) [SUSv3]	fwrite_unlocked(GLIBC_2.1) [LSB]	getc(GLIBC_2.0) [SUSv3]	getc_unlocked(GLIBC_2.0) [SUSv3]
getchar(GLIBC_2.0) [SUSv3]	getchar_unlocked(GLIBC_2.0) [SUSv3]	getdelim(GLIBC_2.0) [SUSv4]	getline(GLIBC_2.0) [SUSv4]
getw(GLIBC_2.0) [SUSv2]	getwc_unlocked(GLIBC_2.2) [LSB]	getwchar_unlocked(GLIBC_2.2) [LSB]	pclose(GLIBC_2.1) [SUSv3]
popen(GLIBC_2.1) [SUSv3]	printf(GLIBC_2.0) [SUSv3]	putc(GLIBC_2.0) [SUSv3]	putc_unlocked(GLIBC_2.0) [SUSv3]
putchar(GLIBC_2.0) [SUSv3]	putchar_unlocked(GLIBC_2.0) [SUSv3]	puts(GLIBC_2.0) [SUSv3]	putw(GLIBC_2.0) [SUSv2]
putwc_unlocked(GLIBC_2.2) [LSB]	putwchar_unlocked(GLIBC_2.2) [LSB]	remove(GLIBC_2.0) [SUSv3]	rewind(GLIBC_2.0) [SUSv3]
rewinddir(GLIBC_2.0) [SUSv3]	scanf(GLIBC_2.0) [LSB]	seekdir(GLIBC_2.0) [SUSv3]	setbuf(GLIBC_2.0) [SUSv3]
setbuffer(GLIBC_2.0) [LSB]	setvbuf(GLIBC_2.0) [SUSv3]	snprintf(GLIBC_2.0) [SUSv3]	sprintf(GLIBC_2.0) [SUSv3]
sscanf(GLIBC_2.0) [LSB]	telldir(GLIBC_2.0) [SUSv3]	tempnam(GLIBC_2.0) [SUSv3]	ungetc(GLIBC_2.0) [SUSv3]
vasprintf(GLIBC_2.0) [LSB]	vdprintf(GLIBC_2.0) [LSB]	vfprintf(GLIBC_2.0) [SUSv3]	vprintf(GLIBC_2.0) [SUSv3]
vsnprintf(GLIBC_2.0) [SUSv3]	vsprintf(GLIBC_2.0) [SUSv3]		

An LSB conforming implementation shall provide the architecture specific deprecated functions for Standard I/O specified in Table 10-7, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-7 libc - Standard I/O Deprecated Function Interfaces

tempnam(GLIBC_2.0) [SUSv3]			
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An LSB conforming implementation shall provide the architecture specific data interfaces for Standard I/O specified in Table 10-8, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-8 libc - Standard I/O Data Interfaces

stderr(GLIBC_2.0) [SUSv3]	stdin(GLIBC_2.0) [SUSv3]	stdout(GLIBC_2.0) [SUSv3]	
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10.2.5 Signal Handling

10.2.5.1 Interfaces for Signal Handling

An LSB conforming implementation shall provide the architecture specific functions for Signal Handling specified in Table 10-9, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-9 libc - Signal Handling Function Interfaces

__libc_current_sigrtmax(GLIBC_2.1) [LSB]	__libc_current_sigrtmin(GLIBC_2.1) [LSB]	__sigsetjmp(GLIBC_2.0) [LSB]	__sysv_signal(GLIBC_2.0) [LSB]
__xpg_sigpause(GLIBC_2.2) [LSB]	bsd_signal(GLIBC_2.0) [SUSv3]	psignal(GLIBC_2.0) [LSB]	raise(GLIBC_2.0) [SUSv3]
sigaction(GLIBC_2.0) [SUSv3]	sigaddset(GLIBC_2.0) [SUSv3]	sigaltstack(GLIBC_2.0) [SUSv3]	sigandset(GLIBC_2.0) [LSB]
sigdelset(GLIBC_2.0) [SUSv3]	sigemptyset(GLIBC_2.0) [SUSv3]	sigfillset(GLIBC_2.0) [SUSv3]	sighold(GLIBC_2.1) [SUSv3]
sigignore(GLIBC_2.1) [SUSv3]	siginterrupt(GLIBC_2.0) [SUSv3]	sigisemptyset(GLIBC_2.0) [LSB]	sigismember(GLIBC_2.0) [SUSv3]
siglongjmp(GLIBC_2.0) [SUSv3]	signal(GLIBC_2.0) [SUSv3]	sigorset(GLIBC_2.0) [LSB]	sigpause(GLIBC_2.0) [LSB]
sigpending(GLIBC_2.0) [SUSv3]	sigprocmask(GLIBC_2.0) [SUSv3]	sigqueue(GLIBC_2.1) [SUSv3]	sigrelse(GLIBC_2.1) [SUSv3]
sigreturn(GLIBC_2.0) [LSB]	sigset(GLIBC_2.1) [SUSv3]	sigsuspend(GLIBC_2.0) [SUSv3]	sigtimedwait(GLIBC_2.1) [SUSv3]
sigwait(GLIBC_2.0) [SUSv3]	sigwaitinfo(GLIBC_2.1) [SUSv3]		

An LSB conforming implementation shall provide the architecture specific deprecated functions for Signal Handling specified in Table 10-10, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-10 libc - Signal Handling Deprecated Function Interfaces

sigpause(GLIBC_2.0) [LSB]			
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An LSB conforming implementation shall provide the architecture specific data interfaces for Signal Handling specified in Table 10-11, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-11 libc - Signal Handling Data Interfaces

_sys_siglist(GLIBC_2.3.3) [LSB]			
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10.2.6 Localization Functions

10.2.6.1 Interfaces for Localization Functions

An LSB conforming implementation shall provide the architecture specific functions for Localization Functions specified in Table 10-12, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-12 libc - Localization Functions Function Interfaces

bind_textdomain_codeset(GLIBC_2.2) [LSB]	bindtextdomain(GLIBC_2.0) [LSB]	catclose(GLIBC_2.0) [SUSv3]	catgets(GLIBC_2.0) [SUSv3]
catopen(GLIBC_2.0) [SUSv3]	dcgettext(GLIBC_2.0) [LSB]	dcngettext(GLIBC_2.2) [LSB]	dgettext(GLIBC_2.0) [LSB]
dngettext(GLIBC_2.2) [LSB]	gettext(GLIBC_2.0) [LSB]	iconv(GLIBC_2.1) [SUSv3]	iconv_close(GLIBC_2.1) [SUSv3]
iconv_open(GLIBC_2.1) [SUSv3]	localeconv(GLIBC_2.2) [SUSv3]	ngettext(GLIBC_2.2) [LSB]	nl_langinfo(GLIBC_2.0) [SUSv3]
setlocale(GLIBC_2.0) [SUSv3]	textdomain(GLIBC_2.0) [LSB]		

An LSB conforming implementation shall provide the architecture specific data interfaces for Localization Functions specified in Table 10-13, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-13 libc - Localization Functions Data Interfaces

_nl_msg_cat_cntr(GLIBC_2.0) [LSB]			
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10.2.7 Posix Spawn Option

10.2.7.1 Interfaces for Posix Spawn Option

An LSB conforming implementation shall provide the architecture specific functions for Posix Spawn Option specified in Table 10-14, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-14 libc - Posix Spawn Option Function Interfaces

posix_spawn(GLIBC_2.2) [SUSv3]	posix_spawn_file_actions_addclose(GLIBC_2.2) [SUSv3]	posix_spawn_file_actions_adddup2(GLIBC_2.2) [SUSv3]	posix_spawn_file_actions_addopen(GLIBC_2.2) [SUSv3]
posix_spawn_file_actions_destroy(GLIBC_2.2) [SUSv3]	posix_spawn_file_actions_init(GLIBC_2.2) [SUSv3]	posix_spawnattr_destroy(GLIBC_2.2) [SUSv3]	posix_spawnattr_getflags(GLIBC_2.2) [SUSv3]
posix_spawnattr_getpgroup(GLIBC_2.2) [SUSv3]	posix_spawnattr_getschedparam(GLIBC_2.2) [SUSv3]	posix_spawnattr_getschedpolicy(GLIBC_2.2) [SUSv3]	posix_spawnattr_getsigdefault(GLIBC_2.2) [SUSv3]
posix_spawnattr_getsigmask(GLIBC_2.2) [SUSv3]	posix_spawnattr_init(GLIBC_2.2) [SUSv3]	posix_spawnattr_setflags(GLIBC_2.2) [SUSv3]	posix_spawnattr_setpgroup(GLIBC_2.2) [SUSv3]
posix_spawnattr_setschedparam(GLIBC_2.2) [SUSv3]	posix_spawnattr_setschedpolicy(GLIBC_2.2) [SUSv3]	posix_spawnattr_setsigdefault(GLIBC_2.2) [SUSv3]	posix_spawnattr_setsigmask(GLIBC_2.2) [SUSv3]
posix_spawn(GLIBC_2.2) [SUSv3]			

10.2.8 Posix Advisory Option

10.2.8.1 Interfaces for Posix Advisory Option

An LSB conforming implementation shall provide the architecture specific functions for Posix Advisory Option specified in Table 10-15, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-15 libc - Posix Advisory Option Function Interfaces

posix_fadvise(GLIBC_2.2) [SUSv3]	posix_fallocate(GLIBC_2.2) [SUSv3]	posix_madvise(GLIBC_2.2) [SUSv3]	posix_memalign(GLIBC_2.2) [SUSv3]
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10.2.9 Socket Interface

10.2.9.1 Interfaces for Socket Interface

An LSB conforming implementation shall provide the architecture specific functions for Socket Interface specified in Table 10-16, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-16 libc - Socket Interface Function Interfaces

__h_errno_location(GLIBC_2.0) [LSB]	accept(GLIBC_2.0) [SUSv3]	bind(GLIBC_2.0) [SUSv3]	bindresvport(GLIBC_2.0) [LSB]
connect(GLIBC_2.0)	gethostid(GLIBC_2.0)	gethostname(GLIBC_2.0)	getpeername(GLIBC_2.0)

.0) [SUSv3]	_2.0) [SUSv3]	BC_2.0) [SUSv3]	IBC_2.0) [SUSv3]
getsockname(GLIBC_2.0) [SUSv3]	getsockopt(GLIBC_2.0) [LSB]	if_freenameindex(GLIBC_2.1) [SUSv3]	if_indextoname(GLIBC_2.1) [SUSv3]
if_nameindex(GLIBC_2.1) [SUSv3]	if_nametoindex(GLIBC_2.1) [SUSv3]	listen(GLIBC_2.0) [SUSv3]	recv(GLIBC_2.0) [SUSv3]
recvfrom(GLIBC_2.0) [SUSv3]	recvmsg(GLIBC_2.0) [SUSv3]	send(GLIBC_2.0) [SUSv4]	sendmsg(GLIBC_2.0) [SUSv4]
sendto(GLIBC_2.0) [SUSv4]	setsockopt(GLIBC_2.0) [LSB]	shutdown(GLIBC_2.0) [SUSv3]	socketatmark(GLIBC_2.2.4) [SUSv3]
socket(GLIBC_2.0) [SUSv3]	socketpair(GLIBC_2.0) [SUSv3]		

An LSB conforming implementation shall provide the architecture specific data interfaces for Socket Interface specified in Table 10-17, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-17 libc - Socket Interface Data Interfaces

in6addr_any(GLIBC_2.1) [SUSv3]	in6addr_loopback(GLIBC_2.1) [SUSv3]		
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10.2.10 Wide Characters

10.2.10.1 Interfaces for Wide Characters

An LSB conforming implementation shall provide the architecture specific functions for Wide Characters specified in Table 10-18, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-18 libc - Wide Characters Function Interfaces

__wcstod_internal(GLIBC_2.0) [LSB]	__wcstof_internal(GLIBC_2.0) [LSB]	__wcstol_internal(GLIBC_2.0) [LSB]	__wcstold_internal(GLIBC_2.0) [LSB]
__wcstoul_internal(GLIBC_2.0) [LSB]	btowc(GLIBC_2.0) [SUSv3]	fgetwc(GLIBC_2.2) [SUSv3]	fgetws(GLIBC_2.2) [SUSv3]
fputwc(GLIBC_2.2) [SUSv3]	fputws(GLIBC_2.2) [SUSv3]	fwide(GLIBC_2.2) [SUSv3]	fwprintf(GLIBC_2.2) [SUSv3]
fwscanf(GLIBC_2.2) [LSB]	getwc(GLIBC_2.2) [SUSv3]	getwchar(GLIBC_2.2) [SUSv3]	mblen(GLIBC_2.0) [SUSv3]
mbrlen(GLIBC_2.0) [SUSv3]	mbrtowc(GLIBC_2.0) [SUSv3]	mbsinit(GLIBC_2.0) [SUSv3]	mbsnrtowcs(GLIBC_2.0) [LSB]
mbsrtowcs(GLIBC_2.0) [SUSv3]	mbstowcs(GLIBC_2.0) [SUSv3]	mbtowc(GLIBC_2.0) [SUSv3]	putwc(GLIBC_2.2) [SUSv3]

putwchar(GLIBC_2.2) [SUSv3]	swprintf(GLIBC_2.2) [SUSv3]	swscanf(GLIBC_2.2) [LSB]	towctrans(GLIBC_2.0) [SUSv3]
tolower(GLIBC_2.0) [SUSv3]	toupper(GLIBC_2.0) [SUSv3]	ungetwc(GLIBC_2.2) [SUSv3]	vfwprintf(GLIBC_2.2) [SUSv3]
vfwscanf(GLIBC_2.2) [LSB]	vswprintf(GLIBC_2.2) [SUSv3]	vswscanf(GLIBC_2.2) [LSB]	vwprintf(GLIBC_2.2) [SUSv3]
vwscanf(GLIBC_2.2) [LSB]	wcpcpy(GLIBC_2.0) [LSB]	wcpncpy(GLIBC_2.0) [LSB]	wcrtomb(GLIBC_2.0) [SUSv3]
wcscasecmp(GLIBC_2.1) [LSB]	wcscat(GLIBC_2.0) [SUSv3]	wcschr(GLIBC_2.0) [SUSv3]	wcscmp(GLIBC_2.0) [SUSv3]
wcscoll(GLIBC_2.0) [SUSv3]	wcscpy(GLIBC_2.0) [SUSv3]	wcscspn(GLIBC_2.0) [SUSv3]	wcsdup(GLIBC_2.0) [LSB]
wcsftime(GLIBC_2.2) [SUSv3]	wcslen(GLIBC_2.0) [SUSv3]	wcsncasecmp(GLIBC_2.1) [LSB]	wcsncat(GLIBC_2.0) [SUSv3]
wcsncmp(GLIBC_2.0) [SUSv3]	wcsncpy(GLIBC_2.0) [SUSv3]	wcsnlen(GLIBC_2.1) [LSB]	wcsnrtombs(GLIBC_2.0) [LSB]
wcspbrk(GLIBC_2.0) [SUSv3]	wcsrchr(GLIBC_2.0) [SUSv3]	wcsrtombs(GLIBC_2.0) [SUSv3]	wcsspn(GLIBC_2.0) [SUSv3]
wcsstr(GLIBC_2.0) [SUSv3]	wcstod(GLIBC_2.0) [SUSv3]	wcstof(GLIBC_2.0) [SUSv3]	wcstoimax(GLIBC_2.1) [SUSv3]
wcstok(GLIBC_2.0) [SUSv3]	wcstol(GLIBC_2.0) [SUSv3]	wcstold(GLIBC_2.0) [SUSv3]	wcstoll(GLIBC_2.1) [SUSv3]
wcstombs(GLIBC_2.0) [SUSv3]	wcstoq(GLIBC_2.0) [LSB]	wctoul(GLIBC_2.0) [SUSv3]	wcstoull(GLIBC_2.1) [SUSv3]
wcstoumax(GLIBC_2.1) [SUSv3]	wcstouq(GLIBC_2.0) [LSB]	wcswcs(GLIBC_2.1) [SUSv3]	wcswidth(GLIBC_2.0) [SUSv3]
wcsxfrm(GLIBC_2.0) [SUSv3]	wctob(GLIBC_2.0) [SUSv3]	wctomb(GLIBC_2.0) [SUSv3]	wctrans(GLIBC_2.0) [SUSv3]
wctype(GLIBC_2.0) [SUSv3]	wcwidth(GLIBC_2.0) [SUSv3]	wmemchr(GLIBC_2.0) [SUSv3]	wmemcmp(GLIBC_2.0) [SUSv3]
wmemcpy(GLIBC_2.0) [SUSv3]	wmemmove(GLIBC_2.0) [SUSv3]	wmemset(GLIBC_2.0) [SUSv3]	wprintf(GLIBC_2.2) [SUSv3]
wscanf(GLIBC_2.2) [LSB]			

10.2.11 String Functions

10.2.11.1 Interfaces for String Functions

An LSB conforming implementation shall provide the architecture specific functions for String Functions specified in Table 10-19, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-19 libc - String Functions Function Interfaces

__memcpy(GLIB	__rawmemchr(G	__stpcpy(GLIBC	__strdup(GLIBC
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BC_2.0) [LSB]	LIBC_2.1) [LSB]	_2.0) [LSB]	_2.0) [LSB]
__strtod_internal (GLIBC_2.0) [LSB]	__strtof_internal(GLIBC_2.0) [LSB]	__strtok_r(GLIB C_2.0) [LSB]	__strtol_internal(GLIBC_2.0) [LSB]
__strtold_interna l(GLIBC_2.0) [LSB]	__strtoll_internal (GLIBC_2.0) [LSB]	__strtoul_interna l(GLIBC_2.0) [LSB]	__strtoull_intern al(GLIBC_2.0) [LSB]
__xpg_strerror_r(GLIBC_2.3.4) [LSB]	bcmp(GLIBC_2.0) [SUSv3]	bcopy(GLIBC_2. 0) [SUSv3]	bzero(GLIBC_2.0) [SUSv3]
ffs(GLIBC_2.0) [SUSv3]	index(GLIBC_2.0) [SUSv3]	memccpy(GLIBC _2.0) [SUSv3]	memchr(GLIBC_ 2.0) [SUSv3]
memcmp(GLIBC _2.0) [SUSv3]	memcpy(GLIBC_ 2.0) [SUSv3]	memmove(GLIB C_2.0) [SUSv3]	memrchr(GLIBC _2.2) [LSB]
memset(GLIBC_ 2.0) [SUSv3]	rindex(GLIBC_2. 0) [SUSv3]	stpcpy(GLIBC_2. 0) [LSB]	stpncpy(GLIBC_ 2.0) [LSB]
strcasemp(GLIB C_2.0) [SUSv3]	strcasestr(GLIBC _2.1) [LSB]	strcat(GLIBC_2.0) [SUSv3]	strchr(GLIBC_2.0) [SUSv3]
strcmp(GLIBC_2. 0) [SUSv3]	strcoll(GLIBC_2. 0) [SUSv3]	strcpy(GLIBC_2. 0) [SUSv3]	strcspn(GLIBC_2 .0) [SUSv3]
strdup(GLIBC_2. 0) [SUSv3]	strerror(GLIBC_2 .0) [SUSv3]	strerror_r(GLIBC _2.0) [LSB]	strfmon(GLIBC_ 2.0) [SUSv3]
strftime(GLIBC_ 2.0) [SUSv3]	strlen(GLIBC_2.0) [SUSv3]	strncasemp(GLI BC_2.0) [SUSv3]	strncat(GLIBC_2. 0) [SUSv3]
strncmp(GLIBC_ 2.0) [SUSv3]	strncpy(GLIBC_2 .0) [SUSv3]	strndup(GLIBC_ 2.0) [LSB]	strnlen(GLIBC_2. 0) [LSB]
strpbrk(GLIBC_2 .0) [SUSv3]	strptime(GLIBC_ 2.0) [LSB]	strchr(GLIBC_2. 0) [SUSv3]	strsep(GLIBC_2.0) [LSB]
strsignal(GLIBC_ 2.0) [LSB]	strspn(GLIBC_2. 0) [SUSv3]	strstr(GLIBC_2.0) [SUSv3]	strtof(GLIBC_2.0) [SUSv3]
strtoimax(GLIBC _2.1) [SUSv3]	strtok(GLIBC_2.0) [SUSv3]	strtok_r(GLIBC_ 2.0) [SUSv3]	strtold(GLIBC_2. 0) [SUSv3]
strtoll(GLIBC_2.0) [SUSv3]	strtoq(GLIBC_2.0) [LSB]	strtoull(GLIBC_2 .0) [SUSv3]	strtoumax(GLIB C_2.1) [SUSv3]
strtouq(GLIBC_2 .0) [LSB]	strxfrm(GLIBC_2 .0) [SUSv3]	swab(GLIBC_2.0) [SUSv3]	

An LSB conforming implementation shall provide the architecture specific deprecated functions for String Functions specified in Table 10-20, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-20 libc - String Functions Deprecated Function Interfaces

strerror_r(GLIBC_2.0) [LSB]			
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10.2.12 IPC Functions

10.2.12.1 Interfaces for IPC Functions

An LSB conforming implementation shall provide the architecture specific functions for IPC Functions specified in Table 10-21, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-21 libc - IPC Functions Function Interfaces

ftok(GLIBC_2.0) [SUSv3]	msgctl(GLIBC_2.2) [SUSv3]	msgget(GLIBC_2.0) [SUSv3]	msgrcv(GLIBC_2.0) [SUSv3]
msgsnd(GLIBC_2.0) [SUSv3]	semctl(GLIBC_2.2) [SUSv3]	semget(GLIBC_2.0) [SUSv3]	semop(GLIBC_2.0) [SUSv3]
shmat(GLIBC_2.0) [SUSv3]	shmctl(GLIBC_2.2) [SUSv3]	shmdt(GLIBC_2.0) [SUSv3]	shmget(GLIBC_2.0) [SUSv3]

10.2.13 Regular Expressions

10.2.13.1 Interfaces for Regular Expressions

An LSB conforming implementation shall provide the architecture specific functions for Regular Expressions specified in Table 10-22, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-22 libc - Regular Expressions Function Interfaces

regcomp(GLIBC_2.0) [SUSv3]	regerror(GLIBC_2.0) [SUSv3]	regexexec(GLIBC_2.3.4) [LSB]	regfree(GLIBC_2.0) [SUSv3]
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10.2.14 Character Type Functions

10.2.14.1 Interfaces for Character Type Functions

An LSB conforming implementation shall provide the architecture specific functions for Character Type Functions specified in Table 10-23, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-23 libc - Character Type Functions Function Interfaces

__ctype_get_mb_cur_max(GLIBC_2.0) [LSB]	_tolower(GLIBC_2.0) [SUSv3]	_toupper(GLIBC_2.0) [SUSv3]	isalnum(GLIBC_2.0) [SUSv3]
isalpha(GLIBC_2.0) [SUSv3]	isascii(GLIBC_2.0) [SUSv3]	isctrl(GLIBC_2.0) [SUSv3]	isdigit(GLIBC_2.0) [SUSv3]
isgraph(GLIBC_2.0) [SUSv3]	islower(GLIBC_2.0) [SUSv3]	isprint(GLIBC_2.0) [SUSv3]	ispunct(GLIBC_2.0) [SUSv3]
isspace(GLIBC_2.0) [SUSv3]	isupper(GLIBC_2.0) [SUSv3]	iswalnum(GLIBC_2.0) [SUSv3]	iswalpha(GLIBC_2.0) [SUSv3]

iswblank(GLIBC_2.1) [SUSv3]	iswcntrl(GLIBC_2.0) [SUSv3]	iswctype(GLIBC_2.0) [SUSv3]	iswdigit(GLIBC_2.0) [SUSv3]
iswgraph(GLIBC_2.0) [SUSv3]	iswlower(GLIBC_2.0) [SUSv3]	iswprint(GLIBC_2.0) [SUSv3]	iswpunct(GLIBC_2.0) [SUSv3]
iswspace(GLIBC_2.0) [SUSv3]	iswupper(GLIBC_2.0) [SUSv3]	iswxdigit(GLIBC_2.0) [SUSv3]	isxdigit(GLIBC_2.0) [SUSv3]
toascii(GLIBC_2.0) [SUSv3]	tolower(GLIBC_2.0) [SUSv3]	toupper(GLIBC_2.0) [SUSv3]	

10.2.15 Time Manipulation

10.2.15.1 Interfaces for Time Manipulation

An LSB conforming implementation shall provide the architecture specific functions for Time Manipulation specified in Table 10-24, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-24 libc - Time Manipulation Function Interfaces

adjtime(GLIBC_2.0) [LSB]	asctime(GLIBC_2.0) [SUSv3]	asctime_r(GLIBC_2.0) [SUSv3]	ctime(GLIBC_2.0) [SUSv3]
ctime_r(GLIBC_2.0) [SUSv3]	difftime(GLIBC_2.0) [SUSv3]	gmtime(GLIBC_2.0) [SUSv3]	gmtime_r(GLIBC_2.0) [SUSv3]
localtime(GLIBC_2.0) [SUSv3]	localtime_r(GLIBC_2.0) [SUSv3]	mktime(GLIBC_2.0) [SUSv3]	tzset(GLIBC_2.0) [SUSv3]
ualarm(GLIBC_2.0) [SUSv3]			

An LSB conforming implementation shall provide the architecture specific data interfaces for Time Manipulation specified in Table 10-25, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-25 libc - Time Manipulation Data Interfaces

__daylight(GLIBC_2.0) [LSB]	__timezone(GLIBC_2.0) [LSB]	__tzname(GLIBC_2.0) [LSB]	daylight(GLIBC_2.0) [SUSv3]
timezone(GLIBC_2.0) [SUSv3]	tzname(GLIBC_2.0) [SUSv3]		

10.2.16 Terminal Interface Functions

10.2.16.1 Interfaces for Terminal Interface Functions

An LSB conforming implementation shall provide the architecture specific functions for Terminal Interface Functions specified in Table 10-26, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-26 libc - Terminal Interface Functions Function Interfaces

cfgetispeed(GLIBC_2.0) [SUSv3]	cfgetspeed(GLIBC_2.0) [SUSv3]	cfmakeraw(GLIBC_2.0) [LSB]	cfsetispeed(GLIBC_2.0) [SUSv3]
cfsetospeed(GLIBC_2.0) [SUSv3]	cfsetspeed(GLIBC_2.0) [SUSv3]	tcdrain(GLIBC_2.0) [SUSv3]	tcflow(GLIBC_2.0) [SUSv3]

BC_2.0) [SUSv3]	C_2.0) [LSB]	0) [SUSv3]	0) [SUSv3]
tcflush(GLIBC_2.0) [SUSv3]	tcgetattr(GLIBC_2.0) [SUSv3]	tcgetpgrp(GLIBC_2.0) [SUSv3]	tcgetsid(GLIBC_2.1) [SUSv3]
tcsendbreak(GLIBC_2.0) [SUSv3]	tcsetattr(GLIBC_2.0) [SUSv3]	tcsetpgrp(GLIBC_2.0) [SUSv3]	

10.2.17 System Database Interface

10.2.17.1 Interfaces for System Database Interface

An LSB conforming implementation shall provide the architecture specific functions for System Database Interface specified in Table 10-27, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-27 libc - System Database Interface Function Interfaces

endgrent(GLIBC_2.0) [SUSv3]	endprotoent(GLIBC_2.0) [SUSv3]	endpwent(GLIBC_2.0) [SUSv3]	endservent(GLIBC_2.0) [SUSv3]
endutent(GLIBC_2.0) [LSB]	endutxent(GLIBC_2.1) [SUSv3]	getgrent(GLIBC_2.0) [SUSv3]	getgrent_r(GLIBC_2.1.2) [LSB]
getgrgid(GLIBC_2.0) [SUSv3]	getgrgid_r(GLIBC_2.1.2) [SUSv3]	getgrnam(GLIBC_2.0) [SUSv3]	getgrnam_r(GLIBC_2.1.2) [SUSv3]
getgrouplist(GLIBC_2.2.4) [LSB]	gethostbyaddr(GLIBC_2.0) [SUSv3]	gethostbyaddr_r(GLIBC_2.1.2) [LSB]	gethostbyname(GLIBC_2.0) [SUSv3]
gethostbyname2(GLIBC_2.0) [LSB]	gethostbyname2_r(GLIBC_2.1.2) [LSB]	gethostbyname_r(GLIBC_2.1.2) [LSB]	getprotobyname(GLIBC_2.0) [SUSv3]
getprotobyname_r(GLIBC_2.1.2) [LSB]	getprotobynumber(GLIBC_2.0) [SUSv3]	getprotobynumber_r(GLIBC_2.1.2) [LSB]	getprotoent(GLIBC_2.0) [SUSv3]
getprotoent_r(GLIBC_2.1.2) [LSB]	getpwent(GLIBC_2.0) [SUSv3]	getpwent_r(GLIBC_2.1.2) [LSB]	getpwnam(GLIBC_2.0) [SUSv3]
getpwnam_r(GLIBC_2.1.2) [SUSv3]	getpwuid(GLIBC_2.0) [SUSv3]	getpwuid_r(GLIBC_2.1.2) [SUSv3]	getservbyname(GLIBC_2.0) [SUSv3]
getservbyname_r(GLIBC_2.1.2) [LSB]	getservbyport(GLIBC_2.0) [SUSv3]	getservbyport_r(GLIBC_2.1.2) [LSB]	getservent(GLIBC_2.0) [SUSv3]
getservent_r(GLIBC_2.1.2) [LSB]	getutent(GLIBC_2.0) [LSB]	getutent_r(GLIBC_2.0) [LSB]	getutxent(GLIBC_2.1) [SUSv3]
getutxid(GLIBC_2.1) [SUSv3]	getutxline(GLIBC_2.1) [SUSv3]	pututxline(GLIBC_2.1) [SUSv3]	setgrent(GLIBC_2.0) [SUSv3]
setgroups(GLIBC_2.0) [LSB]	setprotoent(GLIBC_2.0) [SUSv3]	setpwent(GLIBC_2.0) [SUSv3]	setservent(GLIBC_2.0) [SUSv3]
setutent(GLIBC_2.0) [LSB]	setutxent(GLIBC_2.0) [LSB]	utmpname(GLIBC_2.0) [LSB]	

2.0) [LSB]	_2.1) [SUSv3]	C_2.0) [LSB]	
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An LSB conforming implementation shall provide the architecture specific deprecated functions for System Database Interface specified in Table 10-28, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-28 libc - System Database Interface Deprecated Function Interfaces

gethostbyaddr(G LIBC_2.0) [SUSv3]	gethostbyaddr_r(GLIBC_2.1.2) [LSB]	gethostbyname(GLIBC_2.0) [SUSv3]	gethostbyname2(GLIBC_2.0) [LSB]
gethostbyname2 _r(GLIBC_2.1.2) [LSB]	gethostbyname_r (GLIBC_2.1.2) [LSB]		

10.2.18 Language Support

10.2.18.1 Interfaces for Language Support

An LSB conforming implementation shall provide the architecture specific functions for Language Support specified in Table 10-29, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-29 libc - Language Support Function Interfaces

__libc_start_mai n(GLIBC_2.0) [LSB]			
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10.2.19 Large File Support

10.2.19.1 Interfaces for Large File Support

An LSB conforming implementation shall provide the architecture specific functions for Large File Support specified in Table 10-30, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-30 libc - Large File Support Function Interfaces

__fxstat64(GLIB C_2.2) [LSB]	__lxstat64(GLIBC _2.2) [LSB]	__xstat64(GLIBC _2.2) [LSB]	creat64(GLIBC_2. 1) [LFS]
fgetpos64(GLIBC _2.2) [LFS]	fopen64(GLIBC_ 2.1) [LFS]	freopen64(GLIBC _2.1) [LFS]	fseeko64(GLIBC_ 2.1) [LFS]
fsetpos64(GLIBC _2.2) [LFS]	fstatfs64(GLIBC_ 2.1) [LSB]	fstatvfs64(GLIBC _2.1) [LFS]	ftello64(GLIBC_2 .1) [LFS]
ftruncate64(GLIB C_2.1) [LFS]	ftw64(GLIBC_2.1) [LFS]	getrlimit64(GLIB C_2.2) [LFS]	lockf64(GLIBC_2 .1) [LFS]
lseek64(GLIBC_2 .1) [LFS]	mkstemp64(GLI BC_2.2) [LSB]	mmap64(GLIBC_ 2.1) [LFS]	nftw64(GLIBC_2. 3.3) [LFS]

open64(GLIBC_2.1) [LFS]	posix_fadvise64(GLIBC_2.3.3) [LSB]	posix_fallocate64(GLIBC_2.3.3) [LSB]	pread64(GLIBC_2.1) [LSB]
pwrite64(GLIBC_2.1) [LSB]	readdir64(GLIBC_2.2) [LFS]	readdir64_r(GLIBC_2.2) [LSB]	statfs64(GLIBC_2.1) [LSB]
statvfs64(GLIBC_2.1) [LFS]	tmpfile64(GLIBC_2.1) [LFS]	truncate64(GLIBC_2.1) [LFS]	

An LSB conforming implementation shall provide the architecture specific deprecated functions for Large File Support specified in Table 10-31, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-31 libc - Large File Support Deprecated Function Interfaces

fstatfs64(GLIBC_2.1) [LSB]	statfs64(GLIBC_2.1) [LSB]		
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10.2.20 Inotify

10.2.20.1 Interfaces for Inotify

No external functions are defined for libc - Inotify in this part of the specification. See also the generic specification.

10.2.21 Standard Library

10.2.21.1 Interfaces for Standard Library

An LSB conforming implementation shall provide the architecture specific functions for Standard Library specified in Table 10-32, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-32 libc - Standard Library Function Interfaces

_Exit(GLIBC_2.1) [SUSv3]	__assert_fail(GLIBC_2.0) [LSB]	__cxa_atexit(GLIBC_2.1.3) [LSB]	__cxa_finalize(GLIBC_2.1.3) [LSB]
__errno_location(GLIBC_2.0) [LSB]	__fpending(GLIBC_2.2) [LSB]	__getpagesize(GLIBC_2.0) [LSB]	__isinf(GLIBC_2.0) [LSB]
__isinff(GLIBC_2.0) [LSB]	__isinfl(GLIBC_2.0) [LSB]	__isnan(GLIBC_2.0) [LSB]	__isnanf(GLIBC_2.0) [LSB]
__isnani(GLIBC_2.0) [LSB]	__sysconf(GLIBC_2.2) [LSB]	__xpg_basename(GLIBC_2.0) [LSB]	_exit(GLIBC_2.0) [SUSv3]
_longjmp(GLIBC_2.0) [SUSv3]	_setjmp(GLIBC_2.0) [SUSv3]	a64l(GLIBC_2.0) [SUSv3]	abort(GLIBC_2.0) [SUSv3]
abs(GLIBC_2.0) [SUSv3]	alphasort(GLIBC_2.0) [SUSv4]	alphasort64(GLIBC_2.2) [LSB]	atof(GLIBC_2.0) [SUSv3]
atoi(GLIBC_2.0)	atol(GLIBC_2.0)	atoll(GLIBC_2.0)	basename(GLIBC_2.0)

[SUSv3]	[SUSv3]	[SUSv3]	_2.0) [LSB]
bsearch(GLIBC_2.0) [SUSv3]	calloc(GLIBC_2.0) [SUSv3]	closelog(GLIBC_2.0) [SUSv3]	confstr(GLIBC_2.0) [SUSv3]
cuserid(GLIBC_2.0) [SUSv2]	daemon(GLIBC_2.0) [LSB]	dirfd(GLIBC_2.0) [SUSv4]	dirname(GLIBC_2.0) [SUSv3]
div(GLIBC_2.0) [SUSv3]	dl_iterate_phdr(GLIBC_2.2.4) [LSB]	drand48(GLIBC_2.0) [SUSv3]	drand48_r(GLIBC_2.0) [LSB]
ecvt(GLIBC_2.0) [SUSv3]	erand48(GLIBC_2.0) [SUSv3]	erand48_r(GLIBC_2.0) [LSB]	err(GLIBC_2.0) [LSB]
error(GLIBC_2.0) [LSB]	errx(GLIBC_2.0) [LSB]	fcvt(GLIBC_2.0) [SUSv3]	fmemopen(GLIBC_2.2) [SUSv4]
fmtmsg(GLIBC_2.1) [SUSv3]	fnmatch(GLIBC_2.2.3) [SUSv3]	fpathconf(GLIBC_2.0) [SUSv3]	free(GLIBC_2.0) [SUSv3]
freeaddrinfo(GLIBC_2.0) [SUSv3]	ftrylockfile(GLIBC_2.0) [SUSv3]	ftw(GLIBC_2.0) [SUSv3]	funlockfile(GLIBC_2.0) [SUSv3]
gai_strerror(GLIBC_2.1) [SUSv3]	gcvt(GLIBC_2.0) [SUSv3]	getaddrinfo(GLIBC_2.0) [SUSv3]	getcwd(GLIBC_2.0) [SUSv3]
getdate(GLIBC_2.1) [SUSv3]	getdomainname(GLIBC_2.0) [LSB]	getenv(GLIBC_2.0) [SUSv3]	getlogin(GLIBC_2.0) [SUSv3]
getlogin_r(GLIBC_2.0) [SUSv3]	getnameinfo(GLIBC_2.1) [SUSv3]	getopt(GLIBC_2.0) [LSB]	getopt_long(GLIBC_2.0) [LSB]
getopt_long_only(GLIBC_2.0) [LSB]	getsubopt(GLIBC_2.0) [SUSv3]	gettimeofday(GLIBC_2.0) [SUSv3]	glob(GLIBC_2.0) [SUSv3]
glob64(GLIBC_2.2) [LSB]	globfree(GLIBC_2.0) [SUSv3]	globfree64(GLIBC_2.1) [LSB]	grantpt(GLIBC_2.1) [SUSv3]
hcreate(GLIBC_2.0) [SUSv3]	hcreate_r(GLIBC_2.0) [LSB]	hdestroy(GLIBC_2.0) [SUSv3]	hdestroy_r(GLIBC_2.0) [LSB]
hsearch(GLIBC_2.0) [SUSv3]	hsearch_r(GLIBC_2.0) [LSB]	htonl(GLIBC_2.0) [SUSv3]	htons(GLIBC_2.0) [SUSv3]
imaxabs(GLIBC_2.1.1) [SUSv3]	imaxdiv(GLIBC_2.1.1) [SUSv3]	inet_addr(GLIBC_2.0) [SUSv3]	inet_aton(GLIBC_2.0) [LSB]
inet_ntoa(GLIBC_2.0) [SUSv3]	inet_ntop(GLIBC_2.0) [SUSv3]	inet_pton(GLIBC_2.0) [SUSv3]	initstate(GLIBC_2.0) [SUSv3]
initstate_r(GLIBC_2.0) [LSB]	insque(GLIBC_2.0) [SUSv3]	isatty(GLIBC_2.0) [SUSv3]	isblank(GLIBC_2.0) [SUSv3]
jrand48(GLIBC_2.0) [SUSv3]	jrand48_r(GLIBC_2.0) [LSB]	l64a(GLIBC_2.0) [SUSv3]	labs(GLIBC_2.0) [SUSv3]
lcong48(GLIBC_2.0) [SUSv3]	lcong48_r(GLIBC_2.0) [LSB]	ldiv(GLIBC_2.0) [SUSv3]	lfind(GLIBC_2.0) [SUSv3]
llabs(GLIBC_2.0) [SUSv3]	lldiv(GLIBC_2.0) [SUSv3]	longjmp(GLIBC_2.0) [SUSv3]	lrand48(GLIBC_2.0) [SUSv3]

lrand48_r(GLIBC_2.0) [LSB]	lsearch(GLIBC_2.0) [SUSv3]	makecontext(GLIBC_2.1) [SUSv3]	malloc(GLIBC_2.0) [SUSv3]
memmem(GLIBC_2.0) [LSB]	mkdtemp(GLIBC_2.2) [SUSv4]	mkstemp(GLIBC_2.0) [SUSv3]	mktemp(GLIBC_2.0) [SUSv3]
mrnd48(GLIBC_2.0) [SUSv3]	mrnd48_r(GLIBC_2.0) [LSB]	nftw(GLIBC_2.3) [SUSv3]	nrnd48(GLIBC_2.0) [SUSv3]
nrnd48_r(GLIBC_2.0) [LSB]	ntohl(GLIBC_2.0) [SUSv3]	ntohs(GLIBC_2.0) [SUSv3]	open_memstream(GLIBC_2.0) [SUSv4]
openlog(GLIBC_2.0) [SUSv3]	perror(GLIBC_2.0) [SUSv3]	posix_openpt(GLIBC_2.2.1) [SUSv3]	ptsname(GLIBC_2.1) [SUSv3]
putenv(GLIBC_2.0) [SUSv3]	qsort(GLIBC_2.0) [SUSv3]	rand(GLIBC_2.0) [SUSv3]	rand_r(GLIBC_2.0) [SUSv3]
random(GLIBC_2.0) [SUSv3]	random_r(GLIBC_2.0) [LSB]	realloc(GLIBC_2.0) [SUSv3]	realpath(GLIBC_2.3) [SUSv3]
remque(GLIBC_2.0) [SUSv3]	scandir(GLIBC_2.0) [SUSv4]	scandir64(GLIBC_2.2) [LSB]	seed48(GLIBC_2.0) [SUSv3]
seed48_r(GLIBC_2.0) [LSB]	sendfile(GLIBC_2.1) [LSB]	setenv(GLIBC_2.0) [SUSv3]	sethostname(GLIBC_2.0) [LSB]
setlogmask(GLIBC_2.0) [SUSv3]	setstate(GLIBC_2.0) [SUSv3]	setstate_r(GLIBC_2.0) [LSB]	srand(GLIBC_2.0) [SUSv3]
srand48(GLIBC_2.0) [SUSv3]	srand48_r(GLIBC_2.0) [LSB]	srandom(GLIBC_2.0) [SUSv3]	srandom_r(GLIBC_2.0) [LSB]
strtod(GLIBC_2.0) [SUSv3]	strtol(GLIBC_2.0) [SUSv3]	strtoul(GLIBC_2.0) [SUSv3]	swapcontext(GLIBC_2.1) [SUSv3]
syslog(GLIBC_2.0) [SUSv3]	system(GLIBC_2.0) [LSB]	tdelete(GLIBC_2.0) [SUSv3]	tfind(GLIBC_2.0) [SUSv3]
tmpfile(GLIBC_2.1) [SUSv3]	tmpnam(GLIBC_2.0) [SUSv3]	tsearch(GLIBC_2.0) [SUSv3]	ttynam(GLIBC_2.0) [SUSv3]
ttynam_r(GLIBC_2.0) [SUSv3]	twalk(GLIBC_2.0) [SUSv3]	unlockpt(GLIBC_2.1) [SUSv3]	unsetenv(GLIBC_2.0) [SUSv3]
usleep(GLIBC_2.0) [SUSv3]	verrx(GLIBC_2.0) [LSB]	vfscanf(GLIBC_2.0) [LSB]	vscanf(GLIBC_2.0) [LSB]
vsscanf(GLIBC_2.0) [LSB]	vsyslog(GLIBC_2.0) [LSB]	warn(GLIBC_2.0) [LSB]	warnx(GLIBC_2.0) [LSB]
wordexp(GLIBC_2.1) [SUSv3]	wordfree(GLIBC_2.1) [SUSv3]		

An LSB conforming implementation shall provide the architecture specific deprecated functions for Standard Library specified in Table 10-33, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-33 libc - Standard Library Deprecated Function Interfaces

basename(GLIBC_2.0) [LSB]	getdomainname(GLIBC_2.0) [LSB]	inet_aton(GLIBC_2.0) [LSB]	tmpnam(GLIBC_2.0) [SUSv3]
---------------------------	--------------------------------	----------------------------	---------------------------

An LSB conforming implementation shall provide the architecture specific data interfaces for Standard Library specified in Table 10-34, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-34 libc - Standard Library Data Interfaces

__environ(GLIBC_2.0) [LSB]	_environ(GLIBC_2.0) [LSB]	_sys_errlist(GLIBC_2.4) [LSB]	environ(GLIBC_2.0) [SUSv3]
getdate_err(GLIBC_2.1) [SUSv3]	optarg(GLIBC_2.0) [SUSv3]	opterr(GLIBC_2.0) [SUSv3]	optind(GLIBC_2.0) [SUSv3]
optopt(GLIBC_2.0) [SUSv3]			

10.2.22 GNU Extensions for libc

10.2.22.1 Interfaces for GNU Extensions for libc

An LSB conforming implementation shall provide the architecture specific functions for GNU Extensions for libc specified in Table 10-35, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-35 libc - GNU Extensions for libc Function Interfaces

gnu_get_libc_release(GLIBC_2.1) [LSB]	gnu_get_libc_version(GLIBC_2.1) [LSB]		
---------------------------------------	---------------------------------------	--	--

10.3 Data Definitions for libc

This section defines global identifiers and their values that are associated with interfaces contained in libc. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

10.3.1 assert.h

```
/*
 * This header is architecture neutral
```

```
* Please refer to the generic specification for details
*/
```

10.3.2 cpio.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.3 ctype.h

```
enum {
    _ISupper = 256,
    _ISlower = 512,
    _ISalpha = 1024,
    _ISdigit = 2048,
    _ISxdigit = 4096,
    _ISspace = 8192,
    _ISprint = 16384,
    _ISgraph = 32768,
    _ISblank = 1,
    _IScntrl = 2,
    _ISpunct = 4,
    _ISalnum = 8
};
```

10.3.4 dirent.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.5 elf.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.6 endian.h

```
#define __BYTE_ORDER    __LITTLE_ENDIAN
```

10.3.7 errno.h

```
#define EDEADLOCK        EDEADLK
```

10.3.8 fcntl.h

```
#define O_LARGEFILE      0100000
#define O_DIRECTORY      0200000
#define O_NOFOLLOW       0400000
#define POSIX_FADV_DONTNEED 4
#define POSIX_FADV_NOREUSE 5
```

```
#define F_GETLK64      12
#define F_SETLK64      13
#define F_SETLKW64     14
```

10.3.9 fmtmsg.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.10 fnmatch.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.11 ftw.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.12 getopt.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.13 glob.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.14 iconv.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.15 langinfo.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.16 limits.h

```
#define LONG_MAX      0x7FFFFFFFL
```

```
#define ULONG_MAX          0xFFFFFFFFFUL

#define CHAR_MAX           SCHAR_MAX
#define CHAR_MIN           SCHAR_MIN

#define PTHREAD_STACK_MIN  16384
```

10.3.17 link.h

```
struct dl_phdr_info {
    Elf32_Addr dlpi_addr;
    const char *dlpi_name;
    const Elf32_Phdr *dlpi_phdr;
    Elf32_Half dlpi_phnum;
    unsigned long long int dlpi_adds;
    unsigned long long int dlpi_subs;
    size_t dlpi_tls_modid;
    void *dlpi_tls_data;
};
```

10.3.18 locale.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.19 net/if.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.20 netdb.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.21 netinet/icmp6.h

```
#define ND_NA_FLAG_OVERRIDE      0x00000020
#define ND_NA_FLAG_SOLICITED    0x00000040
#define ND_NA_FLAG_ROUTER       0x00000080
#define ICMP6_RR_RESULT_FLAGS_FORBIDDEN 0x0010
#define ICMP6_RR_RESULT_FLAGS_OOB 0x0020
```

10.3.22 netinet/igmp.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.23 netinet/in.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.24 netinet/in_sysm.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.25 netinet/ip.h

```

struct timestamp {
    u_int8_t len;
    u_int8_t ptr;
    unsigned int flags:4;
    unsigned int overflow:4;
    u_int32_t data[9];
};

struct iphdr {
    unsigned int ihl:4;
    unsigned int version:4;
    u_int8_t tos;
    u_int16_t tot_len;
    u_int16_t id;
    u_int16_t frag_off;
    u_int8_t ttl;
    u_int8_t protocol;
    u_int16_t check;
    u_int32_t saddr;
    u_int32_t daddr;
};

struct ip {
    unsigned int ip_hl:4;
    unsigned int ip_v:4;
    u_int8_t ip_tos;
    u_short ip_len;
    u_short ip_id;
    u_short ip_off;
    u_int8_t ip_ttl;
    u_int8_t ip_p;
    u_short ip_sum;
    struct in_addr ip_src;
    struct in_addr ip_dst;
};

struct ip_timestamp {
    u_int8_t ipt_code;
    u_int8_t ipt_len;
    u_int8_t ipt_ptr;
    unsigned int ipt_flg:4;
    unsigned int ipt_oflw:4;
    u_int32_t data[9];
};

```

10.3.26 netinet/ip6.h

```

#define IP6_ALERT_MLD    0x0000

```

```
#define IP6F_MORE_FRAG    0x0100
#define IP6_ALERT_RSVP    0x0100
#define IP6_ALERT_AN      0x0200
#define IP6F_RESERVED_MASK    0x0600
#define IP6F_OFF_MASK      0xf8ff
```

10.3.27 netinet/ip_icmp.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.28 netinet/tcp.h

```
struct tcphdr {
    uint16_t source;
    uint16_t dest;
    uint32_t seq;
    uint32_t ack_seq;
    uint16_t resl:4;
    uint16_t doff:4;
    uint16_t fin:1;
    uint16_t syn:1;
    uint16_t rst:1;
    uint16_t psh:1;
    uint16_t ack:1;
    uint16_t urg:1;
    uint16_t res2:2;
    uint16_t window;
    uint16_t check;
    uint16_t urg_ptr;
};
```

10.3.29 netinet/udp.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.30 nl_types.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.31 pwd.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.32 regex.h

```
/*
```

```
* This header is architecture neutral
* Please refer to the generic specification for details
*/
```

10.3.33 rpc/auth.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.34 rpc/clnt.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.35 rpc/rpc_msg.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.36 rpc/svc.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.37 rpc/types.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.38 rpc/xdr.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.39 sched.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.40 search.h

```
/*
```

```

* This header is architecture neutral
* Please refer to the generic specification for details
*/

```

10.3.41 setjmp.h

```
typedef int __jmp_buf[6];
```

10.3.42 signal.h

```

#define SIGEV_PAD_SIZE ((SIGEV_MAX_SIZE/sizeof(int))-3)

#define SI_PAD_SIZE ((SI_MAX_SIZE/sizeof(int))-3)

struct sigaction {
    union {
        sighandler_t _sa_handler;
        void (*_sa_sigaction) (int, siginfo_t *, void *);
    } __sigaction_handler;
    sigset_t sa_mask;
    unsigned long int sa_flags;
    void (*sa_restorer) (void);
};

#define MINSIGSTKSZ 2048 /* Minimum stack size for a
signal handler. */
#define SIGSTKSZ 8192 /* System default stack size. */

struct _fpreg {
    unsigned short significand[4];
    unsigned short exponent;
};

struct _fpxreg {
    unsigned short significand[4];
    unsigned short exponent;
    unsigned short padding[3];
};

struct _xmmreg {
    unsigned long int element[4];
};

struct _fpstate {
    unsigned long int cw;
    unsigned long int sw;
    unsigned long int tag;
    unsigned long int ipoff;
    unsigned long int cssel;
    unsigned long int dataoff;
    unsigned long int datasel;
    struct _fpreg _st[8];
    unsigned short status;
    unsigned short magic;
    unsigned long int _fxsr_env[6];
    unsigned long int mxcsr;
    unsigned long int reserved;
    struct _fpxreg _fxsr_st[8];
    struct _xmmreg _xmm[8];
    unsigned long int padding[56];
};

struct sigcontext {
    unsigned short gs;
    unsigned short __gsh;
    unsigned short fs;

```



```

unsigned short __fsh;
unsigned short es;
unsigned short __esh;
unsigned short ds;
unsigned short __dsh;
unsigned long int edi;
unsigned long int esi;
unsigned long int ebp;
unsigned long int esp;
unsigned long int ebx;
unsigned long int edx;
unsigned long int ecx;
unsigned long int eax;
unsigned long int trapno;
unsigned long int err;
unsigned long int eip;
unsigned short cs;
unsigned short __csh;
unsigned long int eflags;
unsigned long int esp_at_signal;
unsigned short ss;
unsigned short __ssh;
struct _fpstate *fpstate;
unsigned long int oldmask;
unsigned long int cr2;
};

```

10.3.43 spawn.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.44 stddef.h

```

typedef long int wchar_t;
typedef unsigned int size_t;
typedef int ptrdiff_t;

```

10.3.45 stdint.h

```

#define INT64_C(c)      c ## LL
#define INTMAX_C(c)     c ## LL
#define __INT64_C(c)    c ## LL
#define UINT64_C(c)     c ## ULL
#define UINTMAX_C(c)    c ## ULL
#define __UINT64_C(c)   c ## ULL

#define INTPTR_MIN      (-2147483647-1)
#define INT_FAST16_MIN  (-2147483647-1)
#define INT_FAST32_MIN  (-2147483647-1)
#define PTRDIFF_MIN     (-2147483647-1)
#define INTPTR_MAX      (2147483647)
#define INT_FAST16_MAX   (2147483647)
#define INT_FAST32_MAX   (2147483647)
#define PTRDIFF_MAX     (2147483647)
#define SIZE_MAX        (4294967295U)
#define UINTPTR_MAX     (4294967295U)
#define UINT_FAST16_MAX  (4294967295U)
#define UINT_FAST32_MAX  (4294967295U)

```

```

typedef long long int int64_t;
typedef long long int intmax_t;
typedef unsigned long long int uintmax_t;
typedef int intptr_t;
typedef unsigned int uintptr_t;
typedef unsigned long long int uint64_t;
typedef long long int int_least64_t;
typedef unsigned long long int uint_least64_t;
typedef int int_fast16_t;
typedef int int_fast32_t;
typedef long long int int_fast64_t;
typedef unsigned int uint_fast16_t;
typedef unsigned int uint_fast32_t;
typedef unsigned long long int uint_fast64_t;

```

10.3.46 stdio.h

```
#define __IO_FILE_SIZE 148
```

10.3.47 stdlib.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.48 sys/epoll.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.49 sys/file.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.50 sys/inotify.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.51 sys/ioctl.h

```

#define TIOCGWINSZ      0x5413
#define FIONREAD        0x541B
#define TIOCNOTTY      0x5422

```

10.3.52 sys/ipc.h

```

struct ipc_perm {
    key_t __key;

```

```

uid_t uid;
gid_t gid;
uid_t cuid;
gid_t cgid;
unsigned short mode;
unsigned short __pad1;
unsigned short __seq;
unsigned short __pad2;
unsigned long int __unused1;
unsigned long int __unused2;
};

```

10.3.53 sys/mman.h

```

#define MCL_CURRENT 1
#define MCL_FUTURE 2

```

10.3.54 sys/msg.h

```

typedef unsigned long int msgqnum_t;
typedef unsigned long int msglen_t;

struct msqid_ds {
    struct ipc_perm msg_perm; /* structure describing operation
permission */
    time_t msg_stime; /* time of last msgsnd command */
    unsigned long int __unused1;
    time_t msg_rtime; /* time of last msgrcv command */
    unsigned long int __unused2;
    time_t msg_ctime; /* time of last change */
    unsigned long int __unused3;
    unsigned long int __msg_cbytes; /* current number of
bytes on queue */
    msgqnum_t msg_qnum; /* number of messages currently
on queue */
    msglen_t msg_qbytes; /* max number of bytes allowed on
queue */
    pid_t msg_lspid; /* pid of last msgsnd() */
    pid_t msg_lrpid; /* pid of last msgrcv() */
    unsigned long int __unused4;
    unsigned long int __unused5;
};

```

10.3.55 sys/param.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.56 sys/poll.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.57 sys/ptrace.h

```

enum __ptrace_request {

```

```

PTRACE_TRACEME = 0,
PTRACE_PEEKTEXT = 1,
PTRACE_PEEKDATA = 2,
PTRACE_PEEKUSER = 3,
PTRACE_POKETEXT = 4,
PTRACE_POKEDATA = 5,
PTRACE_POKEUSER = 6,
PTRACE_CONT = 7,
PTRACE_KILL = 8,
PTRACE_SINGLESTEP = 9,
PTRACE_GETREGS = 12,
PTRACE_SETREGS = 13,
PTRACE_GETFPREGS = 14,
PTRACE_SETFPREGS = 15,
PTRACE_ATTACH = 16,
PTRACE_DETACH = 17,
PTRACE_GETFPXREGS = 18,
PTRACE_SETFPXREGS = 19,
PTRACE_SYSCALL = 24,
PTRACE_SETOPTIONS = 0x4200,
PTRACE_GETEVENTMSG = 0x4201,
PTRACE_GETSIGINFO = 0x4202,
PTRACE_SETSIGINFO = 0x4203
};

```

10.3.58 sys/resource.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.59 sys/select.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.60 sys/sem.h

```

struct semid_ds {
    struct ipc_perm sem_perm;    /* operation permission struct */
    time_t sem_otime;           /* last semop() time */
    unsigned long int __unused1;
    time_t sem_ctime;           /* last time changed by semctl() */
};

/*
    unsigned long int __unused2;
    unsigned long int sem_nsems;    /* number of semaphores
in set */
    unsigned long int __unused3;
    unsigned long int __unused4;
};

```

10.3.61 sys/shm.h

```

#define SHMLBA  (__getpagesize())

typedef unsigned long int shmatt_t;

struct shmid_ds {

```

```

struct ipc_perm shm_perm;
int shm_segsz;
time_t shm_atime;
unsigned long int __unused1;
time_t shm_dtime;
unsigned long int __unused2;
time_t shm_ctime;
unsigned long int __unused3;
pid_t shm_cpid;
pid_t shm_lpid;
shmatt_t shm_nattch;
unsigned long int __unused4;
unsigned long int __unused5;
};

```

10.3.62 sys/socket.h

```

typedef uint32_t __ss_aligntype;

#define SO_RCVLOWAT      18
#define SO_SNDLOWAT      19
#define SO_RCVTIMEO      20
#define SO_SNDTIMEO      21

```

10.3.63 sys/stat.h

```

#define _MKNOD_VER      1
#define _STAT_VER       3

struct stat {
    dev_t st_dev;
    unsigned short __pad1;
    unsigned long int st_ino;
    mode_t st_mode;
    nlink_t st_nlink;
    uid_t st_uid;
    gid_t st_gid;
    dev_t st_rdev;
    unsigned short __pad2;
    off_t st_size;
    blksize_t st_blksize;
    blkcnt_t st_blocks;
    struct timespec st_atim; /* Time of last access. */
    struct timespec st_mtim; /* Time of last modification. */
    struct timespec st_ctim; /* Time of last status change. */
    unsigned long int __unused4;
    unsigned long int __unused5;
};

struct stat64 {
    dev_t st_dev;
    unsigned int __pad1;
    ino_t __st_ino;
    mode_t st_mode;
    nlink_t st_nlink;
    uid_t st_uid;
    gid_t st_gid;
    dev_t st_rdev;
    unsigned int __pad2;
    off64_t st_size;
    blksize_t st_blksize;
    blkcnt64_t st_blocks;
    struct timespec st_atim; /* Time of last access. */
    struct timespec st_mtim; /* Time of last modification. */
    struct timespec st_ctim; /* Time of last status change. */
};

```

```

        ino64_t st_ino;
    };

```

10.3.64 sys/statfs.h

```

struct statfs {
    int f_type; /* type of filesystem */
    int f_bsize; /* optimal transfer block size */
    fsblkcnt_t f_blocks; /* total data blocks in file
system */
    fsblkcnt_t f_bfree; /* free blocks in fs */
    fsblkcnt_t f_bavail; /* free blocks avail to non-
superuser */
    fsfilcnt_t f_files; /* total file nodes in file
system */
    fsfilcnt_t f_ffree; /* free file nodes in file system
*/
    fsid_t f_fsid; /* file system id */
    int f_namelen; /* maximum length of filenames */
    int f_frsize; /* fragment size */
    int f_spare[5]; /* spare for later */
};

struct statfs64 {
    int f_type; /* type of filesystem */
    int f_bsize; /* optimal transfer block size */
    fsblkcnt64_t f_blocks; /* total data blocks in file
system */
    fsblkcnt64_t f_bfree; /* free blocks in fs */
    fsblkcnt64_t f_bavail; /* free blocks avail to non-
superuser */
    fsfilcnt64_t f_files; /* total file nodes in file
system */
    fsfilcnt64_t f_ffree; /* free file nodes in file system
*/
    fsid_t f_fsid; /* file system id */
    int f_namelen; /* maximum length of filenames */
    int f_frsize; /* fragment size */
    int f_spare[5]; /* spare for later */
};

```

10.3.65 sys/statvfs.h

```

struct statvfs {
    unsigned long int f_bsize;
    unsigned long int f_frsize;
    fsblkcnt_t f_blocks;
    fsblkcnt_t f_bfree;
    fsblkcnt_t f_bavail;
    fsfilcnt_t f_files;
    fsfilcnt_t f_ffree;
    fsfilcnt_t f_favail;
    unsigned long int f_fsid;
    int __f_unused;
    unsigned long int f_flag;
    unsigned long int f_namemax;
    int __f_spare[6];
};

struct statvfs64 {
    unsigned long int f_bsize;
    unsigned long int f_frsize;
    fsblkcnt64_t f_blocks;
    fsblkcnt64_t f_bfree;
    fsblkcnt64_t f_bavail;
    fsfilcnt64_t f_files;

```

```

    fsfilcnt64_t f_ffree;
    fsfilcnt64_t f_favail;
    unsigned long int f_fsid;
    int __f_unused;
    unsigned long int f_flag;
    unsigned long int f_namemax;
    int __f_spare[6];
};

```

10.3.66 sys/sysinfo.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.67 sys/time.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.68 sys/timeb.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.69 sys/times.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.70 sys/types.h

```

typedef int32_t ssize_t;

#define __FDSET_LONGS    32

```

10.3.71 sys/un.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.72 sys/utsname.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.73 sys/wait.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.74 syslog.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.75 tar.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.3.76 termios.h

```
#define OLCUC      0000002
#define ONLCR      0000004
#define XCASE      0000004
#define NLDLY      0000400
#define CR1        0001000
#define IUCLC      0001000
#define CR2        0002000
#define CR3        0003000
#define CRDLY      0003000
#define TAB1       0004000
#define TAB2       0010000
#define TAB3       0014000
#define TABDLY     0014000
#define BS1        0020000
#define BSDLY      0020000
#define VT1        0040000
#define VTDLY      0040000
#define FF1        0100000
#define FFDLY      0100000

#define VSUSP      10
#define VEOL       11
#define VREPRINT   12
#define VDISCARD   13
#define VWERASE    14
#define VEOL2      16
#define VMIN       6
#define VSWTC      7
#define VSTART     8
#define VSTOP      9

#define IXON       0002000
#define IXOFF      0010000

#define CS6        0000020
#define CS7        0000040
#define CS8        0000060
#define CSIZE      0000060
```



```

#define CSTOPB 0000100
#define CREAD 0000200
#define PARENB 0000400
#define PARODD 0001000
#define HUPCL 0002000
#define CLOCAL 0004000
#define VTIME 5

#define ISIG 0000001
#define ICANON 0000002
#define ECHOE 0000020
#define ECHOK 0000040
#define ECHONL 0000100
#define NOFLSH 0000200
#define TOSTOP 0000400
#define ECHOCTL 0001000
#define ECHOPRT 0002000
#define ECHOKE 0004000
#define FLUSHO 0010000
#define PENDIN 0040000
#define IEXTEN 0100000

```

10.3.77 ucontext.h

```

typedef int greg_t;

#define NGREG 19

typedef greg_t gregset_t[19];

struct _libc_fpreg {
    unsigned short significand[4];
    unsigned short exponent;
};

struct _libc_fpstate {
    unsigned long int cw;
    unsigned long int sw;
    unsigned long int tag;
    unsigned long int ipoff;
    unsigned long int cssel;
    unsigned long int dataoff;
    unsigned long int datasel;
    struct _libc_fpreg __st[8];
    unsigned long int status;
};
typedef struct _libc_fpstate *fpregset_t;

typedef struct {
    gregset_t gregs;
    fpregset_t fpregs;
    unsigned long int oldmask;
    unsigned long int cr2;
} mcontext_t;

typedef struct ucontext {
    unsigned long int uc_flags;
    struct ucontext *uc_link;
    stack_t uc_stack;
    mcontext_t uc_mcontext;
    sigset_t uc_sigmask;
    struct _libc_fpstate __fpregs_mem;
} ucontext_t;

```

10.3.78 ulimit.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.79 unistd.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.80 utime.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.81 utmp.h

```

struct lastlog {
    time_t ll_time;
    char ll_line[UT_LINESIZE];
    char ll_host[UT_HOSTSIZE];
};

struct utmp {
    short ut_type;           /* Type of login. */
    pid_t ut_pid;           /* Process ID of login process. */
    /*
    char ut_line[UT_LINESIZE]; /* Devicename. */
    char ut_id[4];           /* Inittab ID. */
    char ut_user[UT_NAMESIZE]; /* Username. */
    char ut_host[UT_HOSTSIZE]; /* Hostname for remote login. */
    struct exit_status ut_exit; /* Exit status of a process
    marked as DEAD_PROCESS. */
    long int ut_session;     /* Session ID, used for
    windowing. */
    struct timeval ut_tv;    /* Time entry was made. */
    int32_t ut_addr_v6[4];  /* Internet address of remote
    host. */
    char __unused[20];      /* Reserved for future use. */
    };

```

10.3.82 utmpx.h

```

struct utmpx {
    short ut_type;           /* Type of login. */
    pid_t ut_pid;           /* Process ID of login process. */
    /*
    char ut_line[UT_LINESIZE]; /* Devicename. */
    char ut_id[4];           /* Inittab ID. */
    char ut_user[UT_NAMESIZE]; /* Username. */
    char ut_host[UT_HOSTSIZE]; /* Hostname for remote login. */
    struct exit_status ut_exit; /* Exit status of a process
    marked as DEAD_PROCESS. */

```

```

    long int ut_session;                /* Session ID, used for
windowing. */
    struct timeval ut_tv;                /* Time entry was made. */
    int32_t ut_addr_v6[4];              /* Internet address of remote
host. */
    char __unused[20];                  /* Reserved for future use. */
};

```

10.3.83 wctype.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.3.84 wordexp.h

```

/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */

```

10.4 Interfaces for libm

Table 10-36 defines the library name and shared object name for the libm library

Table 10-36 libm Definition

Library:	libm
SONAME:	libm.so.6

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

[LSB] ISO/IEC 23360 Part 1

[SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)

10.4.1 Math

10.4.1.1 Interfaces for Math

An LSB conforming implementation shall provide the architecture specific functions for Math specified in Table 10-37, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-37 libm - Math Function Interfaces

__finite(GLIBC_2.1) [LSB]	__finitef(GLIBC_2.1) [LSB]	__finitel(GLIBC_2.1) [LSB]	__fpclassify(GLIBC_2.1) [LSB]
__fpclassifyf(GLIBC_2.1) [LSB]	__fpclassifyl(GLIBC_2.1) [LSB]	__signbit(GLIBC_2.1) [LSB]	__signbitf(GLIBC_2.1) [LSB]
__signbitl(GLIBC_2.1) [LSB]	acos(GLIBC_2.0) [SUSv3]	acosf(GLIBC_2.0) [SUSv3]	acosh(GLIBC_2.0) [SUSv3]
acoshf(GLIBC_2.0) [SUSv3]	acoshl(GLIBC_2.0) [SUSv3]	acosl(GLIBC_2.0) [SUSv3]	asin(GLIBC_2.0) [SUSv3]
asinf(GLIBC_2.0)	asinh(GLIBC_2.0)	asinhf(GLIBC_2.0)	asinhf(GLIBC_2.0)

[SUSv3]	) [SUSv3]	0) [SUSv3]	0) [SUSv3]
asinl(GLIBC_2.0) [SUSv3]	atan(GLIBC_2.0) [SUSv3]	atan2(GLIBC_2.0) [SUSv3]	atan2f(GLIBC_2. 0) [SUSv3]
atan2l(GLIBC_2. 0) [SUSv3]	atanf(GLIBC_2.0) [SUSv3]	atanh(GLIBC_2.0) [SUSv3]	atanhf(GLIBC_2. 0) [SUSv3]
atanhl(GLIBC_2. 0) [SUSv3]	atanl(GLIBC_2.0) [SUSv3]	cabs(GLIBC_2.1) [SUSv3]	cabsf(GLIBC_2.1) [SUSv3]
cabsl(GLIBC_2.1) [SUSv3]	cacos(GLIBC_2.1) [SUSv3]	cacosf(GLIBC_2. 1) [SUSv3]	cacosh(GLIBC_2. 1) [SUSv3]
cacoshf(GLIBC_2 .1) [SUSv3]	cacoshl(GLIBC_2 .1) [SUSv3]	cacosl(GLIBC_2.1) [SUSv3]	carg(GLIBC_2.1) [SUSv3]
cargf(GLIBC_2.1) [SUSv3]	cargl(GLIBC_2.1) [SUSv3]	casin(GLIBC_2.1) [SUSv3]	casinf(GLIBC_2.1) [SUSv3]
casinh(GLIBC_2. 1) [SUSv3]	casinhf(GLIBC_2. 1) [SUSv3]	casinhl(GLIBC_2. 1) [SUSv3]	casinl(GLIBC_2.1) [SUSv3]
catan(GLIBC_2.1) [SUSv3]	catanf(GLIBC_2. 1) [SUSv3]	catanh(GLIBC_2. 1) [SUSv3]	catanhf(GLIBC_2 .1) [SUSv3]
catanhl(GLIBC_2 .1) [SUSv3]	catanl(GLIBC_2.1) [SUSv3]	cbrt(GLIBC_2.0) [SUSv3]	cbrtf(GLIBC_2.0) [SUSv3]
cbrtl(GLIBC_2.0) [SUSv3]	ccos(GLIBC_2.1) [SUSv3]	ccosf(GLIBC_2.1) [SUSv3]	ccosh(GLIBC_2.1) [SUSv3]
ccoshf(GLIBC_2. 1) [SUSv3]	ccoshl(GLIBC_2. 1) [SUSv3]	ccosl(GLIBC_2.1) [SUSv3]	ceil(GLIBC_2.0) [SUSv3]
ceilf(GLIBC_2.0) [SUSv3]	ceill(GLIBC_2.0) [SUSv3]	cexp(GLIBC_2.1) [SUSv3]	cexpf(GLIBC_2.1) [SUSv3]
cexpl(GLIBC_2.1) [SUSv3]	cimag(GLIBC_2. 1) [SUSv3]	cimagf(GLIBC_2. 1) [SUSv3]	cimagl(GLIBC_2. 1) [SUSv3]
clog(GLIBC_2.1) [SUSv3]	clog10(GLIBC_2. 1) [LSB]	clog10f(GLIBC_2 .1) [LSB]	clog10l(GLIBC_2. 1) [LSB]
clogf(GLIBC_2.1) [SUSv3]	clogl(GLIBC_2.1) [SUSv3]	conj(GLIBC_2.1) [SUSv3]	conjf(GLIBC_2.1) [SUSv3]
conjl(GLIBC_2.1) [SUSv3]	copysign(GLIBC _2.0) [SUSv3]	copysignf(GLIBC _2.0) [SUSv3]	copysignl(GLIBC _2.0) [SUSv3]
cos(GLIBC_2.0) [SUSv3]	cosf(GLIBC_2.0) [SUSv3]	cosh(GLIBC_2.0) [SUSv3]	coshf(GLIBC_2.0) [SUSv3]
coshl(GLIBC_2.0) [SUSv3]	cosl(GLIBC_2.0) [SUSv3]	cpow(GLIBC_2.1) [SUSv3]	cpowf(GLIBC_2. 1) [SUSv3]
cpowl(GLIBC_2. 1) [SUSv3]	cproj(GLIBC_2.1) [SUSv3]	cprojf(GLIBC_2.1) [SUSv3]	cprojl(GLIBC_2.1) [SUSv3]
creal(GLIBC_2.1) [SUSv3]	crealf(GLIBC_2.1) [SUSv3]	creall(GLIBC_2.1) [SUSv3]	csin(GLIBC_2.1) [SUSv3]
csinf(GLIBC_2.1)	csinh(GLIBC_2.1)	csinhf(GLIBC_2.1)	csinhl(GLIBC_2.1)

[SUSv3]	[SUSv3]	) [SUSv3]	) [SUSv3]
csinl(GLIBC_2.1) [SUSv3]	csqrt(GLIBC_2.1) [SUSv3]	csqrtf(GLIBC_2.1)) [SUSv3]	csqrtl(GLIBC_2.1)) [SUSv3]
ctan(GLIBC_2.1) [SUSv3]	ctanf(GLIBC_2.1) [SUSv3]	ctanh(GLIBC_2.1)) [SUSv3]	ctanhf(GLIBC_2.1) [SUSv3]
ctanhf(GLIBC_2.1) [SUSv3]	ctanl(GLIBC_2.1) [SUSv3]	drem(GLIBC_2.0)) [LSB]	dremf(GLIBC_2.0) [LSB]
dremf(GLIBC_2.0)) [LSB]	erf(GLIBC_2.0) [SUSv3]	erfc(GLIBC_2.0) [SUSv3]	erfcf(GLIBC_2.0) [SUSv3]
erfcf(GLIBC_2.0) [SUSv3]	erff(GLIBC_2.0) [SUSv3]	erfl(GLIBC_2.0) [SUSv3]	exp(GLIBC_2.0) [SUSv3]
exp10(GLIBC_2.1)) [LSB]	exp10f(GLIBC_2.1) [LSB]	exp10l(GLIBC_2.1) [LSB]	exp2(GLIBC_2.1) [SUSv3]
exp2f(GLIBC_2.1)) [SUSv3]	exp2l(GLIBC_2.1)) [SUSv3]	expf(GLIBC_2.0) [SUSv3]	expl(GLIBC_2.0) [SUSv3]
expm1(GLIBC_2.0) [SUSv3]	expm1f(GLIBC_2.0) [SUSv3]	expm1l(GLIBC_2.0) [SUSv3]	fabs(GLIBC_2.0) [SUSv3]
fabsf(GLIBC_2.0) [SUSv3]	fabsl(GLIBC_2.0) [SUSv3]	fdim(GLIBC_2.1) [SUSv3]	fdimf(GLIBC_2.1)) [SUSv3]
fdiml(GLIBC_2.1)) [SUSv3]	feclearexcept(GLIBC_2.2) [SUSv3]	fedisableexcept(GLIBC_2.2) [LSB]	feenableexcept(GLIBC_2.2) [LSB]
fegetenv(GLIBC_2.2) [SUSv3]	fegetexcept(GLIBC_2.2) [LSB]	fegetexceptflag(GLIBC_2.2) [SUSv3]	fegetround(GLIBC_2.1) [SUSv3]
feholdexcept(GLIBC_2.1) [SUSv3]	feraiseexcept(GLIBC_2.2) [SUSv3]	fesetenv(GLIBC_2.2) [SUSv3]	fesetexceptflag(GLIBC_2.2) [SUSv3]
fesetround(GLIBC_2.1) [SUSv3]	fetestexcept(GLIBC_2.1) [SUSv3]	feupdateenv(GLIBC_2.2) [SUSv3]	finite(GLIBC_2.0) [LSB]
finitef(GLIBC_2.0)) [LSB]	finitel(GLIBC_2.0)) [LSB]	floor(GLIBC_2.0) [SUSv3]	floorf(GLIBC_2.0)) [SUSv3]
floorl(GLIBC_2.0)) [SUSv3]	fma(GLIBC_2.1) [SUSv3]	fmaf(GLIBC_2.1) [SUSv3]	fmal(GLIBC_2.1) [SUSv3]
fmax(GLIBC_2.1) [SUSv3]	fmaxf(GLIBC_2.1)) [SUSv3]	fmaxl(GLIBC_2.1)) [SUSv3]	fmin(GLIBC_2.1) [SUSv3]
fminf(GLIBC_2.1)) [SUSv3]	fminl(GLIBC_2.1)) [SUSv3]	fmod(GLIBC_2.0)) [SUSv3]	fmodf(GLIBC_2.0) [SUSv3]
fmodl(GLIBC_2.0)) [SUSv3]	frexp(GLIBC_2.0) [SUSv3]	frexpf(GLIBC_2.0)) [SUSv3]	frexpl(GLIBC_2.0)) [SUSv3]
gamma(GLIBC_2.0) [LSB]	gammaf(GLIBC_2.0) [LSB]	gammal(GLIBC_2.0) [LSB]	hypot(GLIBC_2.0)) [SUSv3]
hypotf(GLIBC_2.0) [SUSv3]	hypotl(GLIBC_2.0) [SUSv3]	ilogb(GLIBC_2.0) [SUSv3]	ilogbf(GLIBC_2.0)) [SUSv3]

ilogbl(GLIBC_2.0) [SUSv3]	j0(GLIBC_2.0) [SUSv3]	j0f(GLIBC_2.0) [LSB]	j0l(GLIBC_2.0) [LSB]
j1(GLIBC_2.0) [SUSv3]	j1f(GLIBC_2.0) [LSB]	j1l(GLIBC_2.0) [LSB]	jn(GLIBC_2.0) [SUSv3]
jnf(GLIBC_2.0) [LSB]	jnl(GLIBC_2.0) [LSB]	ldexp(GLIBC_2.0) [SUSv3]	ldexpf(GLIBC_2.0) [SUSv3]
ldexpl(GLIBC_2.0) [SUSv3]	lgamma(GLIBC_2.0) [SUSv3]	lgamma_r(GLIBC_2.0) [LSB]	lgammaf(GLIBC_2.0) [SUSv3]
lgammaf_r(GLIBC_2.0) [LSB]	lgammal(GLIBC_2.0) [SUSv3]	lgammal_r(GLIBC_2.0) [LSB]	llrint(GLIBC_2.1) [SUSv3]
llrintf(GLIBC_2.1) [SUSv3]	llrintl(GLIBC_2.1) [SUSv3]	llround(GLIBC_2.1) [SUSv3]	llroundf(GLIBC_2.1) [SUSv3]
llroundl(GLIBC_2.1) [SUSv3]	log(GLIBC_2.0) [SUSv3]	log10(GLIBC_2.0) [SUSv3]	log10f(GLIBC_2.0) [SUSv3]
log10l(GLIBC_2.0) [SUSv3]	log1p(GLIBC_2.0) [SUSv3]	log1pf(GLIBC_2.0) [SUSv3]	log1pl(GLIBC_2.0) [SUSv3]
log2(GLIBC_2.1) [SUSv3]	log2f(GLIBC_2.1) [SUSv3]	log2l(GLIBC_2.1) [SUSv3]	logb(GLIBC_2.0) [SUSv3]
logbf(GLIBC_2.0) [SUSv3]	logbl(GLIBC_2.0) [SUSv3]	logf(GLIBC_2.0) [SUSv3]	logl(GLIBC_2.0) [SUSv3]
lrint(GLIBC_2.1) [SUSv3]	lrintf(GLIBC_2.1) [SUSv3]	lrintl(GLIBC_2.1) [SUSv3]	lround(GLIBC_2.1) [SUSv3]
lroundf(GLIBC_2.1) [SUSv3]	lroundl(GLIBC_2.1) [SUSv3]	matherr(GLIBC_2.0) [LSB]	modf(GLIBC_2.0) [SUSv3]
modff(GLIBC_2.0) [SUSv3]	modfl(GLIBC_2.0) [SUSv3]	nan(GLIBC_2.1) [SUSv3]	nanf(GLIBC_2.1) [SUSv3]
nanl(GLIBC_2.1) [SUSv3]	nearbyint(GLIBC_2.1) [SUSv3]	nearbyintf(GLIBC_2.1) [SUSv3]	nearbyintl(GLIBC_2.1) [SUSv3]
nextafter(GLIBC_2.0) [SUSv3]	nextafterf(GLIBC_2.0) [SUSv3]	nextafterl(GLIBC_2.0) [SUSv3]	nexttoward(GLIBC_2.1) [SUSv3]
nexttowardf(GLIBC_2.1) [SUSv3]	nexttowardl(GLIBC_2.1) [SUSv3]	pow(GLIBC_2.0) [SUSv3]	pow10(GLIBC_2.1) [LSB]
pow10f(GLIBC_2.1) [LSB]	pow10l(GLIBC_2.1) [LSB]	powf(GLIBC_2.0) [SUSv3]	powl(GLIBC_2.0) [SUSv3]
remainder(GLIBC_2.0) [SUSv3]	remainderf(GLIBC_2.0) [SUSv3]	remainderl(GLIBC_2.0) [SUSv3]	remquo(GLIBC_2.1) [SUSv3]
remquof(GLIBC_2.1) [SUSv3]	remquol(GLIBC_2.1) [SUSv3]	rint(GLIBC_2.0) [SUSv3]	rintf(GLIBC_2.0) [SUSv3]
rintl(GLIBC_2.0) [SUSv3]	round(GLIBC_2.1) [SUSv3]	roundf(GLIBC_2.1) [SUSv3]	roundl(GLIBC_2.1) [SUSv3]
scalb(GLIBC_2.0) [SUSv3]	scalbf(GLIBC_2.0) [LSB]	scalbl(GLIBC_2.0) [LSB]	scalbln(GLIBC_2.1) [SUSv3]

scalblnf(GLIBC_2.1) [SUSv3]	scalblnl(GLIBC_2.1) [SUSv3]	scalbn(GLIBC_2.0) [SUSv3]	scalbnf(GLIBC_2.0) [SUSv3]
scalbnl(GLIBC_2.0) [SUSv3]	significand(GLIBC_2.0) [LSB]	significandf(GLIBC_2.0) [LSB]	significandl(GLIBC_2.0) [LSB]
sin(GLIBC_2.0) [SUSv3]	sincos(GLIBC_2.1) [LSB]	sincosf(GLIBC_2.1) [LSB]	sincosl(GLIBC_2.1) [LSB]
sinf(GLIBC_2.0) [SUSv3]	sinh(GLIBC_2.0) [SUSv3]	sinhf(GLIBC_2.0) [SUSv3]	sinhl(GLIBC_2.0) [SUSv3]
sinl(GLIBC_2.0) [SUSv3]	sqrt(GLIBC_2.0) [SUSv3]	sqrtf(GLIBC_2.0) [SUSv3]	sqrtil(GLIBC_2.0) [SUSv3]
tan(GLIBC_2.0) [SUSv3]	tanf(GLIBC_2.0) [SUSv3]	tanh(GLIBC_2.0) [SUSv3]	tanhf(GLIBC_2.0) [SUSv3]
tanh(GLIBC_2.0) [SUSv3]	tanl(GLIBC_2.0) [SUSv3]	tgamma(GLIBC_2.1) [SUSv3]	tgammaf(GLIBC_2.1) [SUSv3]
tgammal(GLIBC_2.1) [SUSv3]	trunc(GLIBC_2.1) [SUSv3]	truncf(GLIBC_2.1) [SUSv3]	truncl(GLIBC_2.1) [SUSv3]
y0(GLIBC_2.0) [SUSv3]	y0f(GLIBC_2.0) [LSB]	y0l(GLIBC_2.0) [LSB]	y1(GLIBC_2.0) [SUSv3]
y1f(GLIBC_2.0) [LSB]	y1l(GLIBC_2.0) [LSB]	yn(GLIBC_2.0) [SUSv3]	ynf(GLIBC_2.0) [LSB]
ynl(GLIBC_2.0) [LSB]			

An LSB conforming implementation shall provide the architecture specific deprecated functions for Math specified in Table 10-38, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-38 libm - Math Deprecated Function Interfaces

drem(GLIBC_2.0) [LSB]	dremf(GLIBC_2.0) [LSB]	dreml(GLIBC_2.0) [LSB]	finite(GLIBC_2.0) [LSB]
finitef(GLIBC_2.0) [LSB]	finitel(GLIBC_2.0) [LSB]	gamma(GLIBC_2.0) [LSB]	gammaf(GLIBC_2.0) [LSB]
gammal(GLIBC_2.0) [LSB]	matherr(GLIBC_2.0) [LSB]		

An LSB conforming implementation shall provide the architecture specific data interfaces for Math specified in Table 10-39, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-39 libm - Math Data Interfaces

signgam(GLIBC_2.0) [SUSv3]			
----------------------------	--	--	--

10.5 Data Definitions for libm

This section defines global identifiers and their values that are associated with interfaces contained in libm. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

10.5.1 complex.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.5.2 fenv.h

```
#define FE_INVALID          0x01
#define FE_DIVBYZERO        0x04
#define FE_OVERFLOW         0x08
#define FE_UNDERFLOW        0x10
#define FE_INEXACT          0x20

#define FE_ALL_EXCEPT    \
    (FE_INEXACT | FE_DIVBYZERO | FE_UNDERFLOW | FE_OVERFLOW | \
    FE_INVALID)

#define FE_TONEAREST        0
#define FE_DOWNWARD         0x400
#define FE_UPWARD           0x800
#define FE_TOWARDZERO       0xc00

typedef unsigned short fexcept_t;

typedef struct {
    unsigned short __control_word;
    unsigned short __unused1;
    unsigned short __status_word;
    unsigned short __unused2;
    unsigned short __tags;
    unsigned short __unused3;
    unsigned int __eip;
    unsigned short __cs_selector;
    unsigned int __opcode:11;
    unsigned int __unused4:5;
    unsigned int __data_offset;
    unsigned short __data_selector;
    unsigned short __unused5;
} fenv_t;
```



```
#define FE_DFL_ENV      ((const fenv_t *) -1)
```

10.5.3 math.h

```
typedef long double float_t;
typedef long double double_t;

#define fpclassify(x) \
    (sizeof (x) == sizeof (float) ? __fpclassifyf (x) : sizeof \
(x) == sizeof (double) ? __fpclassify (x) : __fpclassifyl (x))
/* Return number of classification appropriate for X. */
#define signbit(x) \
    (sizeof (x) == sizeof (float)? __signbitf (x): sizeof (x) \
== sizeof (double)? __signbit (x) : __signbitl (x)) /* Return \
nonzero value if sign of X is negative. */
#define isfinite(x) \
    (sizeof (x) == sizeof (float) ? __finitef (x) : sizeof (x) \
== sizeof (double)? __finite (x) : __finitel (x)) /* Return \
nonzero value if X is not +-Inf or NaN. */
#define isinf(x) \
    (sizeof (x) == sizeof (float) ? __isinf (x): sizeof (x) == \
sizeof (double) ? __isinf (x) : __isinfl (x))
#define isnan(x) \
    (sizeof (x) == sizeof (float) ? __isnanf (x) : sizeof (x) \
== sizeof (double) ? __isnan (x) : __isnanl (x))

#define HUGE_VAL      0x1.0p32767L

#define FP_ILOGB0      (-2147483647 - 1)
#define FP_ILOGBNAN    (-2147483647 - 1)

extern int __fpclassifyl(long double);
extern int __signbitl(long double);
extern long double exp2l(long double);
```

10.6 Interface Definitions for libm

The interfaces defined on the following pages are included in libm and are defined by this specification. Unless otherwise noted, these interfaces shall be included in the source standard.

Other interfaces listed in Section 10.4 shall behave as described in the referenced base document. For interfaces referencing LSB and not listed below, please see the generic part of the specification.

__fpclassifyl

Name

__fpclassifyl — Classify real floating type

Synopsis

```
int __fpclassifyl(long double arg);
```

Description

__fpclassifyl() has the same specification as fpclassify() in POSIX 1003.1-2001 (ISO/IEC 9945-2003), except that the argument type for __fpclassifyl() is known to be long double.

__fpclassifyl() is not in the source standard; it is only in the binary standard.

__signbitl**Name**

__signbitl — test sign of floating point value

Synopsis

```
#include <math.h>
int __signbitl(long double arg);
```

Description

__signbitl() has the same specification as signbit() in POSIX 1003.1-2001 (ISO/IEC 9945-2003), except that the argument type for __signbitl() is known to be long double.

__signbitl() is not in the source standard; it is only in the binary standard.

10.7 Interfaces for libpthread

Table 10-40 defines the library name and shared object name for the libpthread library

Table 10-40 libpthread Definition

Library:	libpthread
SONAME:	libpthread.so.0

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

[LFS] Large File Support
 [LSB] ISO/IEC 23360 Part 1
 [SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)

10.7.1 Realtime Threads**10.7.1.1 Interfaces for Realtime Threads**

An LSB conforming implementation shall provide the architecture specific functions for Realtime Threads specified in Table 10-41, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-41 libpthread - Realtime Threads Function Interfaces

pthread_attr_getinheritsched(GLIBC_2.0) [SUSv3]	pthread_attr_getschedpolicy(GLIBC_2.0) [SUSv3]	pthread_attr_getscope(GLIBC_2.0) [SUSv3]	pthread_attr_setinheritsched(GLIBC_2.0) [SUSv3]
pthread_attr_setschedpolicy(GLIBC_2.0) [SUSv3]	pthread_attr_setscope(GLIBC_2.0) [SUSv3]	pthread_getschedparam(GLIBC_2.0) [SUSv3]	pthread_setschedparam(GLIBC_2.0) [SUSv3]

10.7.2 Advanced Realtime Threads

10.7.2.1 Interfaces for Advanced Realtime Threads

An LSB conforming implementation shall provide the architecture specific functions for Advanced Realtime Threads specified in Table 10-42, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-42 libpthread - Advanced Realtime Threads Function Interfaces

pthread_barrier_destroy(GLIBC_2.2) [SUSv3]	pthread_barrier_init(GLIBC_2.2) [SUSv3]	pthread_barrier_wait(GLIBC_2.2) [SUSv3]	pthread_barrierattr_destroy(GLIBC_2.2) [SUSv3]
pthread_barrierattr_init(GLIBC_2.2) [SUSv3]	pthread_barrierattr_setpshared(GLIBC_2.2) [SUSv3]	pthread_getcpu(unistd.h) [SUSv3]	pthread_spin_destroy(GLIBC_2.2) [SUSv3]
pthread_spin_init(GLIBC_2.2) [SUSv3]	pthread_spin_lock(GLIBC_2.2) [SUSv3]	pthread_spin_trylock(GLIBC_2.2) [SUSv3]	pthread_spin_unlock(GLIBC_2.2) [SUSv3]

10.7.3 Posix Threads

10.7.3.1 Interfaces for Posix Threads

An LSB conforming implementation shall provide the architecture specific functions for Posix Threads specified in Table 10-43, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-43 libpthread - Posix Threads Function Interfaces

_pthread_cleanup_pop(GLIBC_2.0) [LSB]	_pthread_cleanup_push(GLIBC_2.0) [LSB]	pthread_attr_destroy(GLIBC_2.0) [SUSv3]	pthread_attr_get_detachstate(GLIBC_2.0) [SUSv3]
pthread_attr_get_guardsize(GLIBC_2.1) [SUSv3]	pthread_attr_get_schedparam(GLIBC_2.0) [SUSv3]	pthread_attr_get_stack(GLIBC_2.2) [SUSv3]	pthread_attr_get_stackaddr(GLIBC_2.1) [SUSv3]
pthread_attr_get_stacksize(GLIBC_2.1) [SUSv3]	pthread_attr_init(GLIBC_2.1) [SUSv3]	pthread_attr_set_detachstate(GLIBC_2.0) [SUSv3]	pthread_attr_set_guardsize(GLIBC_2.1) [SUSv3]
pthread_attr_setschedparam(GLIBC_2.0) [SUSv3]	pthread_attr_setstack(GLIBC_2.2) [SUSv3]	pthread_attr_setstackaddr(GLIBC_2.1) [SUSv3]	pthread_attr_setstacksize(GLIBC_2.1) [SUSv3]
pthread_cancel(GLIBC_2.0) [SUSv3]	pthread_cond_broadcast(GLIBC_2.3.2) [SUSv3]	pthread_cond_destroy(GLIBC_2.3.2) [SUSv3]	pthread_cond_init(GLIBC_2.3.2) [SUSv3]
pthread_cond_signal(GLIBC_2.3.2) [SUSv3]	pthread_cond_timedwait(GLIBC_2.3.2) [SUSv3]	pthread_cond_wait(GLIBC_2.3.2) [SUSv3]	pthread_condattr_destroy(GLIBC_2.0) [SUSv3]
pthread_condattr_getpshared(GLIBC_2.0) [SUSv3]	pthread_condattr_init(GLIBC_2.0) [SUSv3]	pthread_condattr_setpshared(GLIBC_2.0) [SUSv3]	pthread_create(GLIBC_2.1) [SUSv3]

BC_2.2) [SUSv3]	[SUSv3]	BC_2.2) [SUSv3]	[SUSv3]
pthread_detach(GLIBC_2.0) [SUSv3]	pthread_equal(GLIBC_2.0) [SUSv3]	pthread_exit(GLIBC_2.0) [SUSv3]	pthread_getconcurrency(GLIBC_2.1) [SUSv3]
pthread_getspecific(GLIBC_2.0) [SUSv3]	pthread_join(GLIBC_2.0) [SUSv3]	pthread_key_create(GLIBC_2.0) [SUSv3]	pthread_key_delete(GLIBC_2.0) [SUSv3]
pthread_kill(GLIBC_2.0) [SUSv3]	pthread_mutex_destroy(GLIBC_2.0) [SUSv3]	pthread_mutex_init(GLIBC_2.0) [SUSv3]	pthread_mutex_lock(GLIBC_2.0) [SUSv3]
pthread_mutex_timedlock(GLIBC_2.2) [SUSv3]	pthread_mutex_trylock(GLIBC_2.0) [SUSv3]	pthread_mutex_unlock(GLIBC_2.0) [SUSv3]	pthread_mutexattr_destroy(GLIBC_2.0) [SUSv3]
pthread_mutexattr_getpshared(GLIBC_2.2) [SUSv3]	pthread_mutexattr_gettype(GLIBC_2.1) [SUSv3]	pthread_mutexattr_init(GLIBC_2.0) [SUSv3]	pthread_mutexattr_setpshared(GLIBC_2.2) [SUSv3]
pthread_mutexattr_settype(GLIBC_2.1) [SUSv3]	pthread_once(GLIBC_2.0) [SUSv3]	pthread_rwlock_destroy(GLIBC_2.1) [SUSv3]	pthread_rwlock_init(GLIBC_2.1) [SUSv3]
pthread_rwlock_rdlock(GLIBC_2.1) [SUSv3]	pthread_rwlock_timedrdlock(GLIBC_2.2) [SUSv3]	pthread_rwlock_timedwrlock(GLIBC_2.2) [SUSv3]	pthread_rwlock_tryrdlock(GLIBC_2.1) [SUSv3]
pthread_rwlock_trywrlock(GLIBC_2.1) [SUSv3]	pthread_rwlock_unlock(GLIBC_2.1) [SUSv3]	pthread_rwlock_wrlock(GLIBC_2.1) [SUSv3]	pthread_rwlockattr_destroy(GLIBC_2.1) [SUSv3]
pthread_rwlockattr_getpshared(GLIBC_2.1) [SUSv3]	pthread_rwlockattr_init(GLIBC_2.1) [SUSv3]	pthread_rwlockattr_setpshared(GLIBC_2.1) [SUSv3]	pthread_self(GLIBC_2.0) [SUSv3]
pthread_setcancelstate(GLIBC_2.0) [SUSv3]	pthread_setcanceltype(GLIBC_2.0) [SUSv3]	pthread_setconcurrency(GLIBC_2.1) [SUSv3]	pthread_setspecific(GLIBC_2.0) [SUSv3]
pthread_sigmask(GLIBC_2.0) [SUSv3]	pthread_testcancel(GLIBC_2.0) [SUSv3]	sem_close(GLIBC_2.1.1) [SUSv3]	sem_destroy(GLIBC_2.1) [SUSv3]
sem_getvalue(GLIBC_2.1) [SUSv3]	sem_init(GLIBC_2.1) [SUSv3]	sem_open(GLIBC_2.1.1) [SUSv3]	sem_post(GLIBC_2.1) [SUSv3]
sem_timedwait(GLIBC_2.2) [SUSv3]	sem_trywait(GLIBC_2.1) [SUSv3]	sem_unlink(GLIBC_2.1.1) [SUSv3]	sem_wait(GLIBC_2.1) [SUSv3]

An LSB conforming implementation shall provide the architecture specific deprecated functions for Posix Threads specified in Table 10-44, with the full mandatory functionality as described in the referenced underlying specification.

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

Table 10-44 libpthread - Posix Threads Deprecated Function Interfaces

pthread_attr_getstackaddr(GLIBC_2.1) [SUSv3]	pthread_attr_setstackaddr(GLIBC_2.1) [SUSv3]		
--	--	--	--

10.7.4 Thread aware versions of libc interfaces

10.7.4.1 Interfaces for Thread aware versions of libc interfaces

An LSB conforming implementation shall provide the architecture specific functions for Thread aware versions of libc interfaces specified in Table 10-45, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-45 libpthread - Thread aware versions of libc interfaces Function Interfaces

lseek64(GLIBC_2.2) [LFS]	open64(GLIBC_2.2) [LFS]	pread(GLIBC_2.2) [SUSv3]	pread64(GLIBC_2.2) [LSB]
pwrite(GLIBC_2.2) [SUSv3]	pwrite64(GLIBC_2.2) [LSB]		

10.7.5 GNU Extensions for libpthread

10.7.5.1 Interfaces for GNU Extensions for libpthread

An LSB conforming implementation shall provide the architecture specific functions for GNU Extensions for libpthread specified in Table 10-46, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-46 libpthread - GNU Extensions for libpthread Function Interfaces

pthread_getattr_np(GLIBC_2.2.3) [LSB]	pthread_mutex_consistent_np(GLIBC_2.4) [LSB]	pthread_mutexattr_getrobust_np(GLIBC_2.4) [LSB]	pthread_mutexattr_setrobust_np(GLIBC_2.4) [LSB]
pthread_rwlockattr_getkind_np(GLIBC_2.1) [LSB]	pthread_rwlockattr_setkind_np(GLIBC_2.1) [LSB]		

10.8 Data Definitions for libpthread

This section defines global identifiers and their values that are associated with interfaces contained in libpthread. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

10.8.1 pthread.h

```
#define __SIZEOF_PTHREAD_BARRIER_T    20
#define __SIZEOF_PTHREAD_MUTEX_T      24
#define __SIZEOF_PTHREAD_RWLOCK_T    32
#define __SIZEOF_PTHREAD_ATTR_T 36
#define PTHREAD_RWLOCK_INITIALIZER    { { 0, 0, 0, 0, 0, 0, 0, 0,
0 } }
#define PTHREAD_MUTEX_INITIALIZER      { { 0, 0, 0, 0, 0, 0, { 0 }
} }

typedef union {
    char __size[__SIZEOF_PTHREAD_BARRIER_T];
    long int __align;
} pthread_barrier_t;

struct __pthread_mutex_s {
    int __lock;
    unsigned int __count;
    int __owner;
    int __kind;
    unsigned int __nusers;
    __extension__ union {
        int __spins;
        pthread_slist_t __list;
    };
};

typedef struct __pthread_internal_slist __pthread_slist_t;

typedef union {
    struct {
        int __lock;
        unsigned int __nr_readers;
        unsigned int __readers_wakeup;
        unsigned int __writer_wakeup;
        unsigned int __nr_readers_queued;
        unsigned int __nr_writers_queued;
        unsigned int __flags;
        int __writer;
    } __data;
    char __size[__SIZEOF_PTHREAD_RWLOCK_T];
    long int __align;
} pthread_rwlock_t;
```

10.8.2 semaphore.h

```
#define __SIZEOF_SEM_T 16
```

10.9 Interfaces for libgcc_s

Table 10-47 defines the library name and shared object name for the libgcc_s library

Table 10-47 libgcc_s Definition

Library:	libgcc_s
SONAME:	libgcc_s.so.1

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

[LSB] ISO/IEC 23360 Part 1

10.9.1 Unwind Library

10.9.1.1 Interfaces for Unwind Library

An LSB conforming implementation shall provide the architecture specific functions for Unwind Library specified in Table 10-48, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-48 libgcc_s - Unwind Library Function Interfaces

_Unwind_Backtrace(GCC_3.3) [LSB]	_Unwind_DeleteException(GCC_3.0) [LSB]	_Unwind_FindEnclosingFunction(GCC_3.3) [LSB]	_Unwind_FindFrame(GCC_3.0) [LSB]
_Unwind_ForceUnwind(GCC_3.0) [LSB]	_Unwind_GetCFA(GCC_3.3) [LSB]	_Unwind_GetDataRelBase(GCC_3.0) [LSB]	_Unwind_GetGR(GCC_3.0) [LSB]
_Unwind_GetIP(GCC_3.0) [LSB]	_Unwind_GetLanguageSpecificData(GCC_3.0) [LSB]	_Unwind_GetRegionStart(GCC_3.0) [LSB]	_Unwind_GetTextRelBase(GCC_3.0) [LSB]
_Unwind_RaiseException(GCC_3.0) [LSB]	_Unwind_Resume(GCC_3.0) [LSB]	_Unwind_Resume_or_Rethrow(GCC_3.3) [LSB]	_Unwind_SetGR(GCC_3.0) [LSB]
_Unwind_SetIP(GCC_3.0) [LSB]			

10.10 Data Definitions for libgcc_s

This section defines global identifiers and their values that are associated with interfaces contained in libgcc_s. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

10.10.1 unwind.h

```
extern _Unwind_Ptr _Unwind_GetDataRelBase(struct _Unwind_Context
*);
extern _Unwind_Ptr _Unwind_GetTextRelBase(struct _Unwind_Context
*);
```

10.11 Interface Definitions for libgcc_s

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

Other interfaces listed in Section 10.9 shall behave as described in the referenced base document. For interfaces referencing LSB and not listed below, please see the generic part of the specification.

_Unwind_Find_FDE

Name

_Unwind_Find_FDE — private C++ error handling method

Synopsis

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

Description

_Unwind_Find_FDE() looks for the object containing *pc*, then inserts into *bases*.

_Unwind_GetDataRelBase

Name

_Unwind_GetDataRelBase — private IA64 C++ error handling method

Synopsis

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

Description

_Unwind_GetDataRelBase() returns the global pointer in register one for *context*.

_Unwind_GetTextRelBase

Name

_Unwind_GetTextRelBase — private IA64 C++ error handling method

Synopsis

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

Description

_Unwind_GetTextRelBase() calls the abort method, then returns.

10.12 Interfaces for libdl

Table 10-49 defines the library name and shared object name for the libdl library

Table 10-49 libdl Definition

Library:	libdl
SONAME:	libdl.so.2

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

[LSB] ISO/IEC 23360 Part 1

[SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)

10.12.1 Dynamic Loader

10.12.1.1 Interfaces for Dynamic Loader

An LSB conforming implementation shall provide the architecture specific functions for Dynamic Loader specified in Table 10-50, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-50 libdl - Dynamic Loader Function Interfaces

dldaddr(GLIBC_2.0) [LSB]	dldclose(GLIBC_2.0) [SUSv3]	dlderror(GLIBC_2.0) [SUSv3]	dldopen(GLIBC_2.1) [LSB]
dldsym(GLIBC_2.0) [LSB]	dldvsym(GLIBC_2.1) [LSB]		

10.13 Data Definitions for libdl

This section defines global identifiers and their values that are associated with interfaces contained in libdl. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

10.13.1 dlfcn.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

10.14 Interfaces for libcrypt

Table 10-51 defines the library name and shared object name for the libcrypt library

Table 10-51 libcrypt Definition

Library:	libcrypt
SONAME:	libcrypt.so.1

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

[SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)

10.14.1 Encryption

10.14.1.1 Interfaces for Encryption

An LSB conforming implementation shall provide the architecture specific functions for Encryption specified in Table 10-52, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-52 libcrypt - Encryption Function Interfaces

crypt(GLIBC_2.0) [SUSv3]	encrypt(GLIBC_2. .0) [SUSv3]	setkey(GLIBC_2. 0) [SUSv3]	
-----------------------------	---------------------------------	-------------------------------	--

IV Utility Libraries

11 Libraries

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.

11.1 Interfaces for libz

Table 11-1 defines the library name and shared object name for the libz library

Table 11-1 libz Definition

Library:	libz
SONAME:	libz.so.1

11.1.1 Compression Library

11.1.1.1 Interfaces for Compression Library

No external functions are defined for libz - Compression Library in this part of the specification. See also the generic specification.

11.2 Data Definitions for libz

This section defines global identifiers and their values that are associated with interfaces contained in libz. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

11.2.1 zconf.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

11.2.2 zlib.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

11.3 Interfaces for libncurses

Table 11-2 defines the library name and shared object name for the libncurses library

Table 11-2 libncurses Definition

Library:	libncurses
SONAME:	libncurses.so.5

11.3.1 Curses

11.3.1.1 Interfaces for Curses

No external functions are defined for libncurses - Curses in this part of the specification. See also the generic specification.

11.4 Data Definitions for libncurses

This section defines global identifiers and their values that are associated with interfaces contained in libncurses. These definitions are organized into groups that correspond to system headers. This convention is used as a convenience for the reader, and does not imply the existence of these headers, or their content. Where an interface is defined as requiring a particular system header file all of the data definitions for that system header file presented here shall be in effect.

This section gives data definitions to promote binary application portability, not to repeat source interface definitions available elsewhere. System providers and application developers should use this ABI to supplement - not to replace - source interface definition specifications.

This specification uses the ISO C (1999) C Language as the reference programming language, and data definitions are specified in ISO C format. The C language is used here as a convenient notation. Using a C language description of these data objects does not preclude their use by other programming languages.

11.4.1 curses.h

```
/*
 * This header is architecture neutral
 * Please refer to the generic specification for details
 */
```

11.5 Interfaces for libutil

Table 11-3 defines the library name and shared object name for the libutil library

Table 11-3 libutil Definition

Library:	libutil
SONAME:	libutil.so.1

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

[LSB] ISO/IEC 23360 Part 1

11.5.1 Utility Functions

11.5.1.1 Interfaces for Utility Functions

An LSB conforming implementation shall provide the architecture specific functions for Utility Functions specified in Table 11-4, with the full mandatory functionality as described in the referenced underlying specification.

Table 11-4 libutil - Utility Functions Function Interfaces

forkpty(GLIBC_2.0) [LSB]	login(GLIBC_2.0) [LSB]	login_tty(GLIBC_2.0) [LSB]	logout(GLIBC_2.0) [LSB]
logwtmp(GLIBC_2.0) [LSB]	openpty(GLIBC_2.0) [LSB]		

V Package Format and Installation

12 Software Installation

12.1 Package Dependencies

The LSB runtime environment shall provide the following dependencies.

`lsb-core-ia32`

This dependency is used to indicate that the application is dependent on features contained in the LSB-Core specification.

This dependency shall have a version of 3.0.

Other LSB modules may add additional dependencies; such dependencies shall have the format `lsb-module-ia32`.

12.2 Package Architecture Considerations

All packages must specify an architecture of `i486`. A LSB runtime environment must accept an architecture of `i486` even if the native architecture is different.

The `archnum` value in the Lead Section shall be `0x0001`.

Annex A Alphabetical Listing of Interfaces

A.1 libc

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

Large File Support [LFS]
 ISO/IEC 23360 Part 1 [LSB]
 RFC 1831/1832 RPC & XDR [RPC & XDR]
 SUSv2 [SUSv2]
 POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]
 POSIX 1003.1-2008 (ISO/IEC 9945-2009) [SUSv4]
 SVID Issue 4 [SVID.4]

Table A-1 libc Function Interfaces

_Exit(GLIBC_2.1.1)[SUSv3]	getprotobyname_r(GLIBC_2.1.2)[LSB]	setgid(GLIBC_2.0)[SUSv3]
_IO_feof(GLIBC_2.0)[LSB]	getprotobyname_r(GLIBC_2.0)[SUSv3]	setgrent(GLIBC_2.0)[SUSv3]
_IO_getc(GLIBC_2.0)[LSB]	getprotobyname_r(GLIBC_2.1.2)[LSB]	setgroups(GLIBC_2.0)[LSB]
_IO_putc(GLIBC_2.0)[LSB]	getprotoent(GLIBC_2.0)[SUSv3]	sethostname(GLIBC_2.0)[LSB]
_IO_puts(GLIBC_2.0)[LSB]	getprotoent_r(GLIBC_2.1.2)[LSB]	setitimer(GLIBC_2.0)[SUSv3]
__assert_fail(GLIBC_2.0)[LSB]	getpwent(GLIBC_2.0)[SUSv3]	setlocale(GLIBC_2.0)[SUSv3]
__ctype_get_mb_cur_max(GLIBC_2.0)[LSB]	getpwent_r(GLIBC_2.1.2)[LSB]	setlogmask(GLIBC_2.0)[SUSv3]
__cxa_atexit(GLIBC_2.1.3)[LSB]	getpwnam(GLIBC_2.0)[SUSv3]	setpgid(GLIBC_2.0)[SUSv3]
__cxa_finalize(GLIBC_2.1.3)[LSB]	getpwnam_r(GLIBC_2.1.2)[SUSv3]	setpgrp(GLIBC_2.0)[SUSv3]
__errno_location(GLIBC_2.0)[LSB]	getpwuid(GLIBC_2.0)[SUSv3]	setpriority(GLIBC_2.0)[SUSv3]
__fpending(GLIBC_2.2)[LSB]	getpwuid_r(GLIBC_2.1.2)[SUSv3]	setprotoent(GLIBC_2.0)[SUSv3]
__fprintf_chk(GLIBC_2.3.4)[LSB]	getrlimit(GLIBC_2.2)[SUSv3]	setpwent(GLIBC_2.0)[SUSv3]
__fxstat(GLIBC_2.0)[LSB]	getrlimit64(GLIBC_2.2)[LFS]	setregid(GLIBC_2.0)[SUSv3]
__fxstat64(GLIBC_2.2)[LSB]	getrusage(GLIBC_2.0)[SUSv3]	setreuid(GLIBC_2.0)[SUSv3]
__getpagesize(GLIBC_2.0)	getservbyname(GLIBC_2.0)	setrlimit(GLIBC_2.2)[SUSv3]

.0)[LSB]	2.0)[SUSv3]	USv3]
__getpgid(GLIBC_2.0)[LSB]	getservbyname_r(GLIBC_2.1.2)[LSB]	setrlimit64(GLIBC_2.1)[LFS]
__h_errno_location(GLIBC_2.0)[LSB]	getservbyport(GLIBC_2.0)[SUSv3]	setservent(GLIBC_2.0)[SUSv3]
__isinf(GLIBC_2.0)[LSB]	getservbyport_r(GLIBC_2.1.2)[LSB]	setsid(GLIBC_2.0)[SUSv3]
__isnff(GLIBC_2.0)[LSB]	getservent(GLIBC_2.0)[SUSv3]	setsockopt(GLIBC_2.0)[LSB]
__isnfl(GLIBC_2.0)[LSB]	getservent_r(GLIBC_2.1.2)[LSB]	setstate(GLIBC_2.0)[SUSv3]
__isnan(GLIBC_2.0)[LSB]	getsid(GLIBC_2.0)[SUSv3]	setstate_r(GLIBC_2.0)[LSB]
__isnanf(GLIBC_2.0)[LSB]	getsockname(GLIBC_2.0)[SUSv3]	setuid(GLIBC_2.0)[SUSv3]
__isnanl(GLIBC_2.0)[LSB]	getsockopt(GLIBC_2.0)[LSB]	setutent(GLIBC_2.0)[LSB]
__libc_current_sigrtmax(GLIBC_2.1)[LSB]	getsubopt(GLIBC_2.0)[SUSv3]	setutxent(GLIBC_2.1)[SUSv3]
__libc_current_sigrtmin(GLIBC_2.1)[LSB]	gettext(GLIBC_2.0)[LSB]	setvbuf(GLIBC_2.0)[SUSv3]
__libc_start_main(GLIBC_2.0)[LSB]	gettimeofday(GLIBC_2.0)[SUSv3]	shmat(GLIBC_2.0)[SUSv3]
__lxstat(GLIBC_2.0)[LSB]	getuid(GLIBC_2.0)[SUSv3]	shmctl(GLIBC_2.2)[SUSv3]
__lxstat64(GLIBC_2.2)[LSB]	getutent(GLIBC_2.0)[LSB]	shmdt(GLIBC_2.0)[SUSv3]
__memcpy(GLIBC_2.0)[LSB]	getutent_r(GLIBC_2.0)[LSB]	shmget(GLIBC_2.0)[SUSv3]
__printf_chk(GLIBC_2.3.4)[LSB]	getutxent(GLIBC_2.1)[SUSv3]	shutdown(GLIBC_2.0)[SUSv3]
__rawmemchr(GLIBC_2.1)[LSB]	getutxid(GLIBC_2.1)[SUSv3]	sigaction(GLIBC_2.0)[SUSv3]
__sigsetjmp(GLIBC_2.0)[LSB]	getutxline(GLIBC_2.1)[SUSv3]	sigaddset(GLIBC_2.0)[SUSv3]
__snprintf_chk(GLIBC_2.3.4)[LSB]	getw(GLIBC_2.0)[SUSv2]	sigaltstack(GLIBC_2.0)[SUSv3]
__sprintf_chk(GLIBC_2.3.4)[LSB]	getwc(GLIBC_2.2)[SUSv3]	sigandset(GLIBC_2.0)[LSB]
__stpcpy(GLIBC_2.0)[LSB]	getwc_unlocked(GLIBC_2.2)[LSB]	sigdelset(GLIBC_2.0)[SUSv3]
__strdup(GLIBC_2.0)[LSB]	getwchar(GLIBC_2.2)[SUSv3]	sigemptyset(GLIBC_2.0)[LSB]

SB]	USv3]	)[SUSv3]
__strtod_internal(GLIBC_2.0)[LSB]	getwchar_unlocked(GLIBC_2.2)[LSB]	sigfillset(GLIBC_2.0)[SUSv3]
__strtof_internal(GLIBC_2.0)[LSB]	getwd(GLIBC_2.0)[SUSv3]	sighold(GLIBC_2.1)[SUSv3]
__strtok_r(GLIBC_2.0)[LSB]	glob(GLIBC_2.0)[SUSv3]	sigignore(GLIBC_2.1)[SUSv3]
__strtol_internal(GLIBC_2.0)[LSB]	glob64(GLIBC_2.2)[LSB]	siginterrupt(GLIBC_2.0)[SUSv3]
__strtold_internal(GLIBC_2.0)[LSB]	globfree(GLIBC_2.0)[SUSv3]	sigisemtpyset(GLIBC_2.0)[LSB]
__strtoll_internal(GLIBC_2.0)[LSB]	globfree64(GLIBC_2.1)[LSB]	sigismember(GLIBC_2.0)[SUSv3]
__strtoul_internal(GLIBC_2.0)[LSB]	gmtime(GLIBC_2.0)[SUSv3]	siglongjmp(GLIBC_2.0)[SUSv3]
__strtoull_internal(GLIBC_2.0)[LSB]	gmtime_r(GLIBC_2.0)[SUSv3]	signal(GLIBC_2.0)[SUSv3]
__sysconf(GLIBC_2.2)[LSB]	gnu_get_libc_release(GLIBC_2.1)[LSB]	sigorset(GLIBC_2.0)[LSB]
__sysv_signal(GLIBC_2.0)[LSB]	gnu_get_libc_version(GLIBC_2.1)[LSB]	sigpause(GLIBC_2.0)[LSB]
__vfprintf_chk(GLIBC_2.3.4)[LSB]	grantpt(GLIBC_2.1)[SUSv3]	sigpending(GLIBC_2.0)[SUSv3]
__vprintf_chk(GLIBC_2.3.4)[LSB]	hcreate(GLIBC_2.0)[SUSv3]	sigprocmask(GLIBC_2.0)[SUSv3]
__vsnprintf_chk(GLIBC_2.3.4)[LSB]	hcreate_r(GLIBC_2.0)[LSB]	sigqueue(GLIBC_2.1)[SUSv3]
__vsprintf_chk(GLIBC_2.3.4)[LSB]	hdestroy(GLIBC_2.0)[SUSv3]	sigrelse(GLIBC_2.1)[SUSv3]
__wcstod_internal(GLIBC_2.0)[LSB]	hdestroy_r(GLIBC_2.0)[LSB]	sigreturn(GLIBC_2.0)[LSB]
__wcstof_internal(GLIBC_2.0)[LSB]	hsearch(GLIBC_2.0)[SUSv3]	sigset(GLIBC_2.1)[SUSv3]
__wcstol_internal(GLIBC_2.0)[LSB]	hsearch_r(GLIBC_2.0)[LSB]	sigsuspend(GLIBC_2.0)[SUSv3]
__wcstold_internal(GLIBC_2.0)[LSB]	htonl(GLIBC_2.0)[SUSv3]	sigtimedwait(GLIBC_2.1)[SUSv3]
__wcstoul_internal(GLIBC_2.0)[LSB]	htons(GLIBC_2.0)[SUSv3]	sigwait(GLIBC_2.0)[SUSv3]
__xmknod(GLIBC_2.0)[LSB]	iconv(GLIBC_2.1)[SUSv3]	sigwaitinfo(GLIBC_2.1)[SUSv3]
__xpg_basename(GLIBC_2.0)[LSB]	iconv_close(GLIBC_2.1)	sleep(GLIBC_2.0)[SUSv3]

C_2.0)[LSB]	[SUSv3]	3]
__xpg_sigpause(GLIBC_2.2)[LSB]	iconv_open(GLIBC_2.1)[SUSv3]	snprintf(GLIBC_2.0)[SUSv3]
__xpg_strerror_r(GLIBC_2.3.4)[LSB]	if_freenameindex(GLIBC_2.1)[SUSv3]	socketatmark(GLIBC_2.2.4)[SUSv3]
__xstat(GLIBC_2.0)[LSB]	if_indextoname(GLIBC_2.1)[SUSv3]	socket(GLIBC_2.0)[SUSv3]
__xstat64(GLIBC_2.2)[LSB]	if_nameindex(GLIBC_2.1)[SUSv3]	socketpair(GLIBC_2.0)[SUSv3]
_exit(GLIBC_2.0)[SUSv3]	if_nametoindex(GLIBC_2.1)[SUSv3]	sprintf(GLIBC_2.0)[SUSv3]
_longjmp(GLIBC_2.0)[SUSv3]	imaxabs(GLIBC_2.1.1)[SUSv3]	srand(GLIBC_2.0)[SUSv3]
_setjmp(GLIBC_2.0)[SUSv3]	imaxdiv(GLIBC_2.1.1)[SUSv3]	srand48(GLIBC_2.0)[SUSv3]
_tolower(GLIBC_2.0)[SUSv3]	index(GLIBC_2.0)[SUSv3]	srand48_r(GLIBC_2.0)[LSB]
_toupper(GLIBC_2.0)[SUSv3]	inet_addr(GLIBC_2.0)[SUSv3]	srandom(GLIBC_2.0)[SUSv3]
a64l(GLIBC_2.0)[SUSv3]	inet_aton(GLIBC_2.0)[LSB]	srandom_r(GLIBC_2.0)[LSB]
abort(GLIBC_2.0)[SUSv3]	inet_ntoa(GLIBC_2.0)[SUSv3]	sscanf(GLIBC_2.0)[LSB]
abs(GLIBC_2.0)[SUSv3]	inet_ntop(GLIBC_2.0)[SUSv3]	statfs(GLIBC_2.0)[LSB]
accept(GLIBC_2.0)[SUSv3]	inet_pton(GLIBC_2.0)[SUSv3]	statfs64(GLIBC_2.1)[LSB]
access(GLIBC_2.0)[SUSv3]	initgroups(GLIBC_2.0)[LSB]	statvfs(GLIBC_2.1)[SUSv3]
acct(GLIBC_2.0)[LSB]	initstate(GLIBC_2.0)[SUSv3]	statvfs64(GLIBC_2.1)[LFS]
adjtime(GLIBC_2.0)[LSB]	initstate_r(GLIBC_2.0)[LSB]	stime(GLIBC_2.0)[LSB]
alarm(GLIBC_2.0)[SUSv3]	insque(GLIBC_2.0)[SUSv3]	stpncpy(GLIBC_2.0)[LSB]
alphasort(GLIBC_2.0)[SUSv4]	ioctl(GLIBC_2.0)[LSB]	stpncpy(GLIBC_2.0)[LSB]
alphasort64(GLIBC_2.2)[LSB]	isalnum(GLIBC_2.0)[SUSv3]	strcasecmp(GLIBC_2.0)[SUSv3]
asctime(GLIBC_2.0)[SUSv3]	isalpha(GLIBC_2.0)[SUSv3]	strcasestr(GLIBC_2.1)[LSB]
asctime_r(GLIBC_2.0)[SUSv3]	isascii(GLIBC_2.0)[SUSv3]	strcat(GLIBC_2.0)[SUSv3]

USv3]	v3]	3]
asprintf(GLIBC_2.0)[LSB]	isatty(GLIBC_2.0)[SUSv3]	strchr(GLIBC_2.0)[SUSv3]
atof(GLIBC_2.0)[SUSv3]	isblank(GLIBC_2.0)[SUSv3]	strcmp(GLIBC_2.0)[SUSv3]
atoi(GLIBC_2.0)[SUSv3]	isctrl(GLIBC_2.0)[SUSv3]	strcoll(GLIBC_2.0)[SUSv3]
atol(GLIBC_2.0)[SUSv3]	isdigit(GLIBC_2.0)[SUSv3]	strcpy(GLIBC_2.0)[SUSv3]
atoll(GLIBC_2.0)[SUSv3]	isgraph(GLIBC_2.0)[SUSv3]	strcspn(GLIBC_2.0)[SUSv3]
authnone_create(GLIBC_2.0)[SVID.4]	islower(GLIBC_2.0)[SUSv3]	strdup(GLIBC_2.0)[SUSv3]
backtrace(GLIBC_2.1)[LSB]	isprint(GLIBC_2.0)[SUSv3]	strerror(GLIBC_2.0)[SUSv3]
backtrace_symbols(GLIBC_2.1)[LSB]	ispunct(GLIBC_2.0)[SUSv3]	strerror_r(GLIBC_2.0)[LSB]
backtrace_symbols_fd(GLIBC_2.1)[LSB]	isspace(GLIBC_2.0)[SUSv3]	strfmon(GLIBC_2.0)[SUSv3]
basename(GLIBC_2.0)[LSB]	isupper(GLIBC_2.0)[SUSv3]	strftime(GLIBC_2.0)[SUSv3]
bcmp(GLIBC_2.0)[SUSv3]	iswalnum(GLIBC_2.0)[SUSv3]	strlen(GLIBC_2.0)[SUSv3]
bcopy(GLIBC_2.0)[SUSv3]	iswalpha(GLIBC_2.0)[SUSv3]	strncasecmp(GLIBC_2.0)[SUSv3]
bind(GLIBC_2.0)[SUSv3]	iswblank(GLIBC_2.1)[SUSv3]	strncat(GLIBC_2.0)[SUSv3]
bind_textdomain_codeset(GLIBC_2.2)[LSB]	iswcntrl(GLIBC_2.0)[SUSv3]	strncmp(GLIBC_2.0)[SUSv3]
bindresvport(GLIBC_2.0)[LSB]	iswctype(GLIBC_2.0)[SUSv3]	strncpy(GLIBC_2.0)[SUSv3]
bindtextdomain(GLIBC_2.0)[LSB]	iswdigit(GLIBC_2.0)[SUSv3]	strndup(GLIBC_2.0)[LSB]
brk(GLIBC_2.0)[SUSv2]	iswgraph(GLIBC_2.0)[SUSv3]	strnlen(GLIBC_2.0)[LSB]
bsd_signal(GLIBC_2.0)[SUSv3]	iswlower(GLIBC_2.0)[SUSv3]	strpbrk(GLIBC_2.0)[SUSv3]
bsearch(GLIBC_2.0)[SUSv3]	iswprint(GLIBC_2.0)[SUSv3]	strptime(GLIBC_2.0)[LSB]
btowc(GLIBC_2.0)[SUSv3]	iswpunct(GLIBC_2.0)[SUSv3]	strrchr(GLIBC_2.0)[SUSv3]
bzero(GLIBC_2.0)[SUSv3]	iswspace(GLIBC_2.0)[SUSv3]	strsep(GLIBC_2.0)[LSB]

3]	USv3]	
calloc(GLIBC_2.0)[SUSv3]	iswupper(GLIBC_2.0)[SUSv3]	strsignal(GLIBC_2.0)[LSB]
callrpc(GLIBC_2.0)[RPC & XDR]	iswxdigit(GLIBC_2.0)[SUSv3]	strspn(GLIBC_2.0)[SUSv3]
catclose(GLIBC_2.0)[SUSv3]	isxdigit(GLIBC_2.0)[SUSv3]	strstr(GLIBC_2.0)[SUSv3]
catgets(GLIBC_2.0)[SUSv3]	jrand48(GLIBC_2.0)[SUSv3]	strtod(GLIBC_2.0)[SUSv3]
catopen(GLIBC_2.0)[SUSv3]	jrand48_r(GLIBC_2.0)[LSB]	strtof(GLIBC_2.0)[SUSv3]
cfgetispeed(GLIBC_2.0)[SUSv3]	key_decryptsession(GLIBC_2.1)[SVID.4]	strtoimax(GLIBC_2.1)[SUSv3]
cfgetospeed(GLIBC_2.0)[SUSv3]	kill(GLIBC_2.0)[LSB]	strtok(GLIBC_2.0)[SUSv3]
cfmakeraw(GLIBC_2.0)[LSB]	killpg(GLIBC_2.0)[SUSv3]	strtok_r(GLIBC_2.0)[SUSv3]
cfsetispeed(GLIBC_2.0)[SUSv3]	l64a(GLIBC_2.0)[SUSv3]	strtol(GLIBC_2.0)[SUSv3]
cfsetospeed(GLIBC_2.0)[SUSv3]	labs(GLIBC_2.0)[SUSv3]	strtold(GLIBC_2.0)[SUSv3]
cfsetspeed(GLIBC_2.0)[LSB]	lchown(GLIBC_2.0)[SUSv3]	strtoll(GLIBC_2.0)[SUSv3]
chdir(GLIBC_2.0)[SUSv3]	lcong48(GLIBC_2.0)[SUSv3]	strtoq(GLIBC_2.0)[LSB]
chmod(GLIBC_2.0)[SUSv3]	lcong48_r(GLIBC_2.0)[LSB]	strtoul(GLIBC_2.0)[SUSv3]
chown(GLIBC_2.1)[SUSv3]	ldiv(GLIBC_2.0)[SUSv3]	strtoull(GLIBC_2.0)[SUSv3]
chroot(GLIBC_2.0)[SUSv2]	lfind(GLIBC_2.0)[SUSv3]	strtoumax(GLIBC_2.1)[SUSv3]
clearerr(GLIBC_2.0)[SUSv3]	link(GLIBC_2.0)[LSB]	strtouq(GLIBC_2.0)[LSB]
clearerr_unlocked(GLIBC_2.0)[LSB]	listen(GLIBC_2.0)[SUSv3]	strxfrm(GLIBC_2.0)[SUSv3]
clnt_create(GLIBC_2.0)[SVID.4]	llabs(GLIBC_2.0)[SUSv3]	svc_getreqset(GLIBC_2.0)[SVID.4]
clnt_pcreateerror(GLIBC_2.0)[SVID.4]	lldiv(GLIBC_2.0)[SUSv3]	svc_register(GLIBC_2.0)[LSB]
clnt_perrno(GLIBC_2.0)[SVID.4]	localeconv(GLIBC_2.2)[SUSv3]	svc_run(GLIBC_2.0)[LSB]
clnt_perror(GLIBC_2.0)[	localtime(GLIBC_2.0)[S	svc_sendreply(GLIBC_2

SVID.4]	USv3]	.0)[LSB]
clnt_spcrcreateerror(GLIBC_2.0)[SVID.4]	localtime_r(GLIBC_2.0)[SUSv3]	svcerr_auth(GLIBC_2.0)[SVID.4]
clnt_sperrno(GLIBC_2.0)[SVID.4]	lockf(GLIBC_2.0)[SUSv3]	svcerr_decode(GLIBC_2.0)[SVID.4]
clnt_sperror(GLIBC_2.0)[SVID.4]	lockf64(GLIBC_2.1)[LFS]	svcerr_noproc(GLIBC_2.0)[SVID.4]
clntraw_create(GLIBC_2.0)[RPC & XDR]	longjmp(GLIBC_2.0)[SUSv3]	svcerr_noprog(GLIBC_2.0)[SVID.4]
clnttcp_create(GLIBC_2.0)[RPC & XDR]	lrnd48(GLIBC_2.0)[SUSv3]	svcerr_progvers(GLIBC_2.0)[SVID.4]
clntudp_bufcreate(GLIBC_2.0)[RPC & XDR]	lrnd48_r(GLIBC_2.0)[LSB]	svcerr_systemerr(GLIBC_2.0)[SVID.4]
clntudp_create(GLIBC_2.0)[RPC & XDR]	lsearch(GLIBC_2.0)[SUSv3]	svcerr_weakauth(GLIBC_2.0)[SVID.4]
clock(GLIBC_2.0)[SUSv3]	lseek(GLIBC_2.0)[SUSv3]	svcf_create(GLIBC_2.0)[RPC & XDR]
close(GLIBC_2.0)[SUSv3]	lseek64(GLIBC_2.1)[LFS]	svcrw_create(GLIBC_2.0)[RPC & XDR]
closedir(GLIBC_2.0)[SUSv3]	makecontext(GLIBC_2.1)[SUSv3]	svctcp_create(GLIBC_2.0)[LSB]
closelog(GLIBC_2.0)[SUSv3]	malloc(GLIBC_2.0)[SUSv3]	svcudp_create(GLIBC_2.0)[LSB]
confstr(GLIBC_2.0)[SUSv3]	mblen(GLIBC_2.0)[SUSv3]	swab(GLIBC_2.0)[SUSv3]
connect(GLIBC_2.0)[SUSv3]	mbrlen(GLIBC_2.0)[SUSv3]	swapcontext(GLIBC_2.1)[SUSv3]
creat(GLIBC_2.0)[SUSv3]	mbrtowc(GLIBC_2.0)[SUSv3]	swprintf(GLIBC_2.2)[SUSv3]
creat64(GLIBC_2.1)[LFS]	mbsinit(GLIBC_2.0)[SUSv3]	swscanf(GLIBC_2.2)[LSB]
ctermid(GLIBC_2.0)[SUSv3]	mbsnrtowcs(GLIBC_2.0)[LSB]	symlink(GLIBC_2.0)[SUSv3]
ctime(GLIBC_2.0)[SUSv3]	mbsrtowcs(GLIBC_2.0)[SUSv3]	sync(GLIBC_2.0)[SUSv3]
ctime_r(GLIBC_2.0)[SUSv3]	mbstowcs(GLIBC_2.0)[SUSv3]	sysconf(GLIBC_2.0)[LSB]
cuserid(GLIBC_2.0)[SUSv2]	mbtowc(GLIBC_2.0)[SUSv3]	sysinfo(GLIBC_2.0)[LSB]
daemon(GLIBC_2.0)[LSB]	memccpy(GLIBC_2.0)[SUSv3]	syslog(GLIBC_2.0)[SUSv3]
dcgettext(GLIBC_2.0)[LSB]	memchr(GLIBC_2.0)[SUSv3]	system(GLIBC_2.0)[LSB]

SB]	USv3]]
dcngettext(GLIBC_2.2)[LSB]	memcmp(GLIBC_2.0)[SUSv3]	tcdrain(GLIBC_2.0)[SUSv3]
dgettext(GLIBC_2.0)[LSB]	memcpy(GLIBC_2.0)[SUSv3]	tcflow(GLIBC_2.0)[SUSv3]
difftime(GLIBC_2.0)[SUSv3]	memmem(GLIBC_2.0)[LSB]	tcflush(GLIBC_2.0)[SUSv3]
dirfd(GLIBC_2.0)[SUSv4]	memmove(GLIBC_2.0)[SUSv3]	tcgetattr(GLIBC_2.0)[SUSv3]
dirname(GLIBC_2.0)[SUSv3]	memrchr(GLIBC_2.2)[LSB]	tcgetpgrp(GLIBC_2.0)[SUSv3]
div(GLIBC_2.0)[SUSv3]	memset(GLIBC_2.0)[SUSv3]	tcgetsid(GLIBC_2.1)[SUSv3]
dl_iterate_phdr(GLIBC_2.2.4)[LSB]	mkdir(GLIBC_2.0)[SUSv3]	tcsendbreak(GLIBC_2.0)[SUSv3]
dngettext(GLIBC_2.2)[LSB]	mkdtemp(GLIBC_2.2)[SUSv4]	tcsetattr(GLIBC_2.0)[SUSv3]
dprintf(GLIBC_2.0)[SUSv4]	mkfifo(GLIBC_2.0)[SUSv3]	tcsetpgrp(GLIBC_2.0)[SUSv3]
drand48(GLIBC_2.0)[SUSv3]	mkstemp(GLIBC_2.0)[SUSv3]	tdelete(GLIBC_2.0)[SUSv3]
drand48_r(GLIBC_2.0)[LSB]	mkstemp64(GLIBC_2.2)[LSB]	telldir(GLIBC_2.0)[SUSv3]
dup(GLIBC_2.0)[SUSv3]	mktemp(GLIBC_2.0)[SUSv3]	tempnam(GLIBC_2.0)[SUSv3]
dup2(GLIBC_2.0)[SUSv3]	mktime(GLIBC_2.0)[SUSv3]	textdomain(GLIBC_2.0)[LSB]
ecvt(GLIBC_2.0)[SUSv3]	mlock(GLIBC_2.0)[SUSv3]	tfind(GLIBC_2.0)[SUSv3]
endgrent(GLIBC_2.0)[SUSv3]	mlockall(GLIBC_2.0)[SUSv3]	time(GLIBC_2.0)[SUSv3]
endprotoent(GLIBC_2.0)[SUSv3]	mmap(GLIBC_2.0)[SUSv3]	times(GLIBC_2.0)[SUSv3]
endpwent(GLIBC_2.0)[SUSv3]	mmap64(GLIBC_2.1)[LFS]	tmpfile(GLIBC_2.1)[SUSv3]
endservent(GLIBC_2.0)[SUSv3]	mprotect(GLIBC_2.0)[SUSv3]	tmpfile64(GLIBC_2.1)[LFS]
endutent(GLIBC_2.0)[LSB]	mrand48(GLIBC_2.0)[SUSv3]	tmpnam(GLIBC_2.0)[SUSv3]
endutxent(GLIBC_2.1)[SUSv3]	mrand48_r(GLIBC_2.0)[LSB]	toascii(GLIBC_2.0)[SUSv3]
erand48(GLIBC_2.0)[SUSv3]	mremap(GLIBC_2.0)[LSB]	tolower(GLIBC_2.0)[SUSv3]

Sv3]	B]	Sv3]
erand48_r(GLIBC_2.0)[LSB]	msgctl(GLIBC_2.2)[SUSv3]	toupper(GLIBC_2.0)[SUSv3]
err(GLIBC_2.0)[LSB]	msgget(GLIBC_2.0)[SUSv3]	towctrans(GLIBC_2.0)[SUSv3]
error(GLIBC_2.0)[LSB]	msgrcv(GLIBC_2.0)[SUSv3]	tolower(GLIBC_2.0)[SUSv3]
errx(GLIBC_2.0)[LSB]	msgsnd(GLIBC_2.0)[SUSv3]	towupper(GLIBC_2.0)[SUSv3]
execl(GLIBC_2.0)[SUSv3]	msync(GLIBC_2.0)[SUSv3]	truncate(GLIBC_2.0)[SUSv3]
execle(GLIBC_2.0)[SUSv3]	munlock(GLIBC_2.0)[SUSv3]	truncate64(GLIBC_2.1)[LFS]
execlp(GLIBC_2.0)[SUSv3]	munlockall(GLIBC_2.0)[SUSv3]	tsearch(GLIBC_2.0)[SUSv3]
execv(GLIBC_2.0)[SUSv3]	munmap(GLIBC_2.0)[SUSv3]	ttynam(GLIBC_2.0)[SUSv3]
execve(GLIBC_2.0)[SUSv3]	nanosleep(GLIBC_2.0)[SUSv3]	ttynam_r(GLIBC_2.0)[SUSv3]
execvp(GLIBC_2.0)[SUSv3]	nftw(GLIBC_2.3.3)[SUSv3]	twalk(GLIBC_2.0)[SUSv3]
exit(GLIBC_2.0)[SUSv3]	nftw64(GLIBC_2.3.3)[LFS]	tzset(GLIBC_2.0)[SUSv3]
fchdir(GLIBC_2.0)[SUSv3]	nggettext(GLIBC_2.2)[LSB]	ualarm(GLIBC_2.0)[SUSv3]
fchmod(GLIBC_2.0)[SUSv3]	nice(GLIBC_2.0)[SUSv3]	ulimit(GLIBC_2.0)[SUSv3]
fchown(GLIBC_2.0)[SUSv3]	nl_langinfo(GLIBC_2.0)[SUSv3]	umask(GLIBC_2.0)[SUSv3]
fclose(GLIBC_2.1)[SUSv3]	nrnd48(GLIBC_2.0)[SUSv3]	uname(GLIBC_2.0)[SUSv3]
fcntl(GLIBC_2.0)[LSB]	nrnd48_r(GLIBC_2.0)[LSB]	ungetc(GLIBC_2.0)[SUSv3]
fcvt(GLIBC_2.0)[SUSv3]	ntohl(GLIBC_2.0)[SUSv3]	ungetwc(GLIBC_2.2)[SUSv3]
fdatasync(GLIBC_2.0)[SUSv3]	ntohs(GLIBC_2.0)[SUSv3]	unlink(GLIBC_2.0)[LSB]
fdopen(GLIBC_2.1)[SUSv3]	open(GLIBC_2.0)[SUSv3]	unlockpt(GLIBC_2.1)[SUSv3]
feof(GLIBC_2.0)[SUSv3]	open64(GLIBC_2.1)[LFS]	unsetenv(GLIBC_2.0)[SUSv3]
feof_unlocked(GLIBC_2	open_memstream(GLIB	usleep(GLIBC_2.0)[SUS

.0)[LSB]	C_2.0)[SUSv4]	v3]
ferror(GLIBC_2.0)[SUSv3]	opendir(GLIBC_2.0)[SUSv3]	utime(GLIBC_2.0)[SUSv3]
ferror_unlocked(GLIBC_2.0)[LSB]	openlog(GLIBC_2.0)[SUSv3]	utimes(GLIBC_2.0)[SUSv3]
fexecve(GLIBC_2.0)[SUSv4]	pathconf(GLIBC_2.0)[SUSv3]	utmpname(GLIBC_2.0)[LSB]
fflush(GLIBC_2.0)[SUSv3]	pause(GLIBC_2.0)[SUSv3]	vasprintf(GLIBC_2.0)[LSB]
fflush_unlocked(GLIBC_2.0)[LSB]	pclose(GLIBC_2.1)[SUSv3]	vdprintf(GLIBC_2.0)[LSB]
ffs(GLIBC_2.0)[SUSv3]	perror(GLIBC_2.0)[SUSv3]	verrx(GLIBC_2.0)[LSB]
fgetc(GLIBC_2.0)[SUSv3]	pipe(GLIBC_2.0)[SUSv3]	vfork(GLIBC_2.0)[SUSv3]
fgetc_unlocked(GLIBC_2.1)[LSB]	pmap_getport(GLIBC_2.0)[LSB]	vfprintf(GLIBC_2.0)[SUSv3]
fgetpos(GLIBC_2.2)[SUSv3]	pmap_set(GLIBC_2.0)[LSB]	vfscanf(GLIBC_2.0)[LSB]
fgetpos64(GLIBC_2.2)[LSF]	pmap_unset(GLIBC_2.0)[LSB]	vfwprintf(GLIBC_2.2)[SUSv3]
fgets(GLIBC_2.0)[SUSv3]	poll(GLIBC_2.0)[SUSv3]	vfwscanf(GLIBC_2.2)[LSB]
fgets_unlocked(GLIBC_2.1)[LSB]	popen(GLIBC_2.1)[SUSv3]	vprintf(GLIBC_2.0)[SUSv3]
fgetwc(GLIBC_2.2)[SUSv3]	posix_fadvise(GLIBC_2.2)[SUSv3]	vscanf(GLIBC_2.0)[LSB]
fgetwc_unlocked(GLIBC_2.2)[LSB]	posix_fadvise64(GLIBC_2.3.3)[LSB]	vsprintf(GLIBC_2.0)[SUSv3]
fgetws(GLIBC_2.2)[SUSv3]	posix_fallocate(GLIBC_2.2)[SUSv3]	vsprintf(GLIBC_2.0)[SUSv3]
fgetws_unlocked(GLIBC_2.2)[LSB]	posix_fallocate64(GLIBC_2.3.3)[LSB]	vsscanf(GLIBC_2.0)[LSB]
fileno(GLIBC_2.0)[SUSv3]	posix_madvise(GLIBC_2.2)[SUSv3]	vswprintf(GLIBC_2.2)[SUSv3]
fileno_unlocked(GLIBC_2.0)[LSB]	posix_memalign(GLIBC_2.2)[SUSv3]	vswscanf(GLIBC_2.2)[LSB]
flock(GLIBC_2.0)[LSB]	posix_openpt(GLIBC_2.1)[SUSv3]	vsyslog(GLIBC_2.0)[LSB]
flockfile(GLIBC_2.0)[SUSv3]	posix_spawn(GLIBC_2.2)[SUSv3]	vwprintf(GLIBC_2.2)[SUSv3]
fmemopen(GLIBC_2.2)[	posix_spawn_file_actio	vwscanf(GLIBC_2.2)[LS

SUSv4]	ns_addclose(GLIBC_2.2) [SUSv3]	B]
fntmsg(GLIBC_2.1)[SU Sv3]	posix_spawn_file_actio ns_adddup2(GLIBC_2.2) [SUSv3]	wait(GLIBC_2.0)[SUSv3]
fnmatch(GLIBC_2.2.3)[S USv3]	posix_spawn_file_actio ns_addopen(GLIBC_2.2) [SUSv3]	wait4(GLIBC_2.0)[LSB]
fopen(GLIBC_2.1)[SUSv 3]	posix_spawn_file_actio ns_destroy(GLIBC_2.2)[SUSv3]	waitid(GLIBC_2.1)[SUS v3]
fopen64(GLIBC_2.1)[LF S]	posix_spawn_file_actio ns_init(GLIBC_2.2)[SUS v3]	waitpid(GLIBC_2.0)[SU Sv3]
fork(GLIBC_2.0)[SUSv3]	posix_spawnattr_destro y(GLIBC_2.2)[SUSv3]	warn(GLIBC_2.0)[LSB]
fpathconf(GLIBC_2.0)[S USv3]	posix_spawnattr_getfla gs(GLIBC_2.2)[SUSv3]	warnx(GLIBC_2.0)[LSB]
fprintf(GLIBC_2.0)[SUS v3]	posix_spawnattr_getpg roup(GLIBC_2.2)[SUSv 3]	wcpcpy(GLIBC_2.0)[LS B]
fputc(GLIBC_2.0)[SUSv 3]	posix_spawnattr_getsch edparam(GLIBC_2.2)[S USv3]	wcpncpy(GLIBC_2.0)[LS B]
fputc_unlocked(GLIBC _2.0)[LSB]	posix_spawnattr_getsch edpolicy(GLIBC_2.2)[S USv3]	wcrtomb(GLIBC_2.0)[S USv3]
fputs(GLIBC_2.0)[SUSv 3]	posix_spawnattr_getsig default(GLIBC_2.2)[SU Sv3]	wcscasecmp(GLIBC_2.1)[LSB]
fputs_unlocked(GLIBC _2.1)[LSB]	posix_spawnattr_getsig mask(GLIBC_2.2)[SUSv 3]	wcscat(GLIBC_2.0)[SUS v3]
fputwc(GLIBC_2.2)[SU Sv3]	posix_spawnattr_init(G LIBC_2.2)[SUSv3]	wcschr(GLIBC_2.0)[SUS v3]
fputwc_unlocked(GLIB C_2.2)[LSB]	posix_spawnattr_setfla gs(GLIBC_2.2)[SUSv3]	wcscmp(GLIBC_2.0)[SU Sv3]
fputws(GLIBC_2.2)[SUS v3]	posix_spawnattr_setpg roup(GLIBC_2.2)[SUSv3]	wcscoll(GLIBC_2.0)[SU Sv3]
fputws_unlocked(GLIB C_2.2)[LSB]	posix_spawnattr_setsch edparam(GLIBC_2.2)[S USv3]	wcscpy(GLIBC_2.0)[SU Sv3]
fread(GLIBC_2.0)[SUSv 3]	posix_spawnattr_setsch edpolicy(GLIBC_2.2)[S USv3]	wcscspn(GLIBC_2.0)[S USv3]

	USv3]	
fread_unlocked(GLIBC_2.1)[LSB]	posix_spawnattr_setsigdefault(GLIBC_2.2)[SUSv3]	wcsdup(GLIBC_2.0)[LSB]
free(GLIBC_2.0)[SUSv3]	posix_spawnattr_setsigmask(GLIBC_2.2)[SUSv3]	wcsftime(GLIBC_2.2)[SUSv3]
freaddrinfo(GLIBC_2.0)[SUSv3]	posix_spawnnp(GLIBC_2.2)[SUSv3]	wcslen(GLIBC_2.0)[SUSv3]
freopen(GLIBC_2.0)[SUSv3]	pread(GLIBC_2.1)[SUSv3]	wcsncasecmp(GLIBC_2.1)[LSB]
freopen64(GLIBC_2.1)[LFS]	pread64(GLIBC_2.1)[LSB]	wcsncat(GLIBC_2.0)[SUSv3]
fscanf(GLIBC_2.0)[LSB]	printf(GLIBC_2.0)[SUSv3]	wcsncmp(GLIBC_2.0)[SUSv3]
fseek(GLIBC_2.0)[SUSv3]	pselect(GLIBC_2.0)[SUSv3]	wcsncpy(GLIBC_2.0)[SUSv3]
fseeko(GLIBC_2.1)[SUSv3]	psignal(GLIBC_2.0)[LSB]	wcsnlen(GLIBC_2.1)[LSB]
fseeko64(GLIBC_2.1)[LFS]	ptrace(GLIBC_2.0)[LSB]	wcsnrtombs(GLIBC_2.0)[LSB]
fsetpos(GLIBC_2.2)[SUSv3]	ptsname(GLIBC_2.1)[SUSv3]	wcspbrk(GLIBC_2.0)[SUSv3]
fsetpos64(GLIBC_2.2)[LFS]	putc(GLIBC_2.0)[SUSv3]	wcsrchr(GLIBC_2.0)[SUSv3]
fstatfs(GLIBC_2.0)[LSB]	putc_unlocked(GLIBC_2.0)[SUSv3]	wcsrtombs(GLIBC_2.0)[SUSv3]
fstatfs64(GLIBC_2.1)[LSB]	putchar(GLIBC_2.0)[SUSv3]	wcsspn(GLIBC_2.0)[SUSv3]
fstatvfs(GLIBC_2.1)[SUSv3]	putchar_unlocked(GLIBC_2.0)[SUSv3]	wcsstr(GLIBC_2.0)[SUSv3]
fstatvfs64(GLIBC_2.1)[LFS]	putenv(GLIBC_2.0)[SUSv3]	wcstod(GLIBC_2.0)[SUSv3]
fsync(GLIBC_2.0)[SUSv3]	puts(GLIBC_2.0)[SUSv3]	wcstof(GLIBC_2.0)[SUSv3]
ftell(GLIBC_2.0)[SUSv3]	pututxline(GLIBC_2.1)[SUSv3]	wcstoimax(GLIBC_2.1)[SUSv3]
ftello(GLIBC_2.1)[SUSv3]	putw(GLIBC_2.0)[SUSv2]	wcstok(GLIBC_2.0)[SUSv3]
ftello64(GLIBC_2.1)[LFS]	putwc(GLIBC_2.2)[SUSv3]	wcstol(GLIBC_2.0)[SUSv3]
ftime(GLIBC_2.0)[SUSv3]	putwc_unlocked(GLIBC_2.2)[LSB]	wcstold(GLIBC_2.0)[SUSv3]

ftok(GLIBC_2.0)[SUSv3]	putwchar(GLIBC_2.2)[SUSv3]	wcstoll(GLIBC_2.1)[SUSv3]
ftruncate(GLIBC_2.0)[SUSv3]	putwchar_unlocked(GLIBC_2.2)[LSB]	wcstombs(GLIBC_2.0)[SUSv3]
ftruncate64(GLIBC_2.1)[LFS]	pwrite(GLIBC_2.1)[SUSv3]	wcstoq(GLIBC_2.0)[LSB]
ftrylockfile(GLIBC_2.0)[SUSv3]	pwrite64(GLIBC_2.1)[LSB]	wcstoul(GLIBC_2.0)[SUSv3]
ftw(GLIBC_2.0)[SUSv3]	qsort(GLIBC_2.0)[SUSv3]	wcstoull(GLIBC_2.1)[SUSv3]
ftw64(GLIBC_2.1)[LFS]	raise(GLIBC_2.0)[SUSv3]	wcstoumax(GLIBC_2.1)[SUSv3]
funlockfile(GLIBC_2.0)[SUSv3]	rand(GLIBC_2.0)[SUSv3]	wcstouq(GLIBC_2.0)[LSB]
fwide(GLIBC_2.2)[SUSv3]	rand_r(GLIBC_2.0)[SUSv3]	wcswcs(GLIBC_2.1)[SUSv3]
fwprintf(GLIBC_2.2)[SUSv3]	random(GLIBC_2.0)[SUSv3]	wcswidth(GLIBC_2.0)[SUSv3]
fwrite(GLIBC_2.0)[SUSv3]	random_r(GLIBC_2.0)[LSB]	wcsxfrm(GLIBC_2.0)[SUSv3]
fwrite_unlocked(GLIBC_2.1)[LSB]	read(GLIBC_2.0)[SUSv3]	wctob(GLIBC_2.0)[SUSv3]
fwscanf(GLIBC_2.2)[LSB]	readdir(GLIBC_2.0)[SUSv3]	wctomb(GLIBC_2.0)[SUSv3]
gai_strerror(GLIBC_2.1)[SUSv3]	readdir64(GLIBC_2.2)[LFS]	wctrans(GLIBC_2.0)[SUSv3]
gcvt(GLIBC_2.0)[SUSv3]	readdir64_r(GLIBC_2.2)[LSB]	wctype(GLIBC_2.0)[SUSv3]
getaddrinfo(GLIBC_2.0)[SUSv3]	readdir_r(GLIBC_2.0)[SUSv3]	wcwidth(GLIBC_2.0)[SUSv3]
getc(GLIBC_2.0)[SUSv3]	readlink(GLIBC_2.0)[SUSv3]	wmemchr(GLIBC_2.0)[SUSv3]
getc_unlocked(GLIBC_2.0)[SUSv3]	readv(GLIBC_2.0)[SUSv3]	wmemcmp(GLIBC_2.0)[SUSv3]
getchar(GLIBC_2.0)[SUSv3]	realloc(GLIBC_2.0)[SUSv3]	wmemcpy(GLIBC_2.0)[SUSv3]
getchar_unlocked(GLIBC_2.0)[SUSv3]	realpath(GLIBC_2.3)[SUSv3]	wmemmove(GLIBC_2.0)[SUSv3]
getcontext(GLIBC_2.1)[SUSv3]	recv(GLIBC_2.0)[SUSv3]	wmemset(GLIBC_2.0)[SUSv3]
getcwd(GLIBC_2.0)[SUSv3]	recvfrom(GLIBC_2.0)[SUSv3]	wordexp(GLIBC_2.1)[SUSv3]

getdate(GLIBC_2.1)[SU Sv3]	recvmsg(GLIBC_2.0)[S USv3]	wordfree(GLIBC_2.1)[S USv3]
getdelim(GLIBC_2.0)[S USv4]	regcomp(GLIBC_2.0)[S USv3]	wprintf(GLIBC_2.2)[SU Sv3]
getdomainname(GLIBC_2.0)[LSB]	regerror(GLIBC_2.0)[SU Sv3]	write(GLIBC_2.0)[SUSv3]
getdtablesize(GLIBC_2.0)[LSB]	regex(GLIBC_2.3.4)[LSB]	writew(GLIBC_2.0)[SUSv3]
getegid(GLIBC_2.0)[SU Sv3]	regfree(GLIBC_2.0)[SUSv3]	wscanf(GLIBC_2.2)[LSB]
getenv(GLIBC_2.0)[SUSv3]	remove(GLIBC_2.0)[SU Sv3]	xdr_accepted_reply(GLIBC_2.0)[SVID.4]
geteuid(GLIBC_2.0)[SU Sv3]	remque(GLIBC_2.0)[SU Sv3]	xdr_array(GLIBC_2.0)[SVID.4]
getgid(GLIBC_2.0)[SUSv3]	rename(GLIBC_2.0)[SU Sv3]	xdr_bool(GLIBC_2.0)[SVID.4]
getgrent(GLIBC_2.0)[S USv3]	rewind(GLIBC_2.0)[SU Sv3]	xdr_bytes(GLIBC_2.0)[SVID.4]
getgrent_r(GLIBC_2.1.2)[LSB]	rewinddir(GLIBC_2.0)[SUSv3]	xdr_callhdr(GLIBC_2.0)[SVID.4]
getgrgid(GLIBC_2.0)[S USv3]	rindex(GLIBC_2.0)[SUSv3]	xdr_callmsg(GLIBC_2.0)[SVID.4]
getgrgid_r(GLIBC_2.1.2)[SUSv3]	rmdir(GLIBC_2.0)[SUSv3]	xdr_char(GLIBC_2.0)[SVID.4]
getgrnam(GLIBC_2.0)[S USv3]	sbrk(GLIBC_2.0)[SUSv2]	xdr_double(GLIBC_2.0)[SVID.4]
getgrnam_r(GLIBC_2.1.2)[SUSv3]	scandir(GLIBC_2.0)[SU Sv4]	xdr_enum(GLIBC_2.0)[SVID.4]
getgrouplist(GLIBC_2.2.4)[LSB]	scandir64(GLIBC_2.2)[LSB]	xdr_float(GLIBC_2.0)[SVID.4]
getgroups(GLIBC_2.0)[SUSv3]	scanf(GLIBC_2.0)[LSB]	xdr_free(GLIBC_2.0)[SVID.4]
gethostbyaddr(GLIBC_2.0)[SUSv3]	sched_get_priority_max(GLIBC_2.0)[SUSv3]	xdr_int(GLIBC_2.0)[SVID.4]
gethostbyaddr_r(GLIBC_2.1.2)[LSB]	sched_get_priority_min(GLIBC_2.0)[SUSv3]	xdr_long(GLIBC_2.0)[SVID.4]
gethostbyname(GLIBC_2.0)[SUSv3]	sched_getparam(GLIBC_2.0)[SUSv3]	xdr_opaque(GLIBC_2.0)[SVID.4]
gethostbyname2(GLIBC_2.0)[LSB]	sched_getscheduler(GLIBC_2.0)[SUSv3]	xdr_opaque_auth(GLIBC_2.0)[SVID.4]
gethostbyname2_r(GLIBC_2.1.2)[LSB]	sched_rr_get_interval(GLIBC_2.0)[SUSv3]	xdr_pointer(GLIBC_2.0)[SVID.4]

gethostbyname_r(GLIBC_2.1.2)[LSB]	sched_setparam(GLIBC_2.0)[SUSv3]	xdr_reference(GLIBC_2.0)[SVID.4]
gethostid(GLIBC_2.0)[SUSv3]	sched_setscheduler(GLIBC_2.0)[LSB]	xdr_rejected_reply(GLIBC_2.0)[SVID.4]
gethostname(GLIBC_2.0)[SUSv3]	sched_yield(GLIBC_2.0)[SUSv3]	xdr_repmsg(GLIBC_2.0)[SVID.4]
getitimer(GLIBC_2.0)[SUSv3]	seed48(GLIBC_2.0)[SUSv3]	xdr_short(GLIBC_2.0)[SVID.4]
getline(GLIBC_2.0)[SUSv4]	seed48_r(GLIBC_2.0)[LSB]	xdr_string(GLIBC_2.0)[SVID.4]
getloadavg(GLIBC_2.2)[LSB]	seekdir(GLIBC_2.0)[SUSv3]	xdr_u_char(GLIBC_2.0)[SVID.4]
getlogin(GLIBC_2.0)[SUSv3]	select(GLIBC_2.0)[SUSv3]	xdr_u_int(GLIBC_2.0)[LSB]
getlogin_r(GLIBC_2.0)[SUSv3]	semctl(GLIBC_2.2)[SUSv3]	xdr_u_long(GLIBC_2.0)[SVID.4]
getnameinfo(GLIBC_2.1)[SUSv3]	semget(GLIBC_2.0)[SUSv3]	xdr_u_short(GLIBC_2.0)[SVID.4]
getopt(GLIBC_2.0)[LSB]	semop(GLIBC_2.0)[SUSv3]	xdr_union(GLIBC_2.0)[SVID.4]
getopt_long(GLIBC_2.0)[LSB]	send(GLIBC_2.0)[SUSv4]	xdr_vector(GLIBC_2.0)[SVID.4]
getopt_long_only(GLIBC_2.0)[LSB]	sendfile(GLIBC_2.1)[LSB]	xdr_void(GLIBC_2.0)[SVID.4]
getpagesize(GLIBC_2.0)[LSB]	sendmsg(GLIBC_2.0)[SUSv4]	xdr_wrapstring(GLIBC_2.0)[SVID.4]
getpeername(GLIBC_2.0)[SUSv3]	sendto(GLIBC_2.0)[SUSv4]	xdrmem_create(GLIBC_2.0)[SVID.4]
getpgid(GLIBC_2.0)[SUSv3]	setbuf(GLIBC_2.0)[SUSv3]	xdrrec_create(GLIBC_2.0)[SVID.4]
getpgrp(GLIBC_2.0)[SUSv3]	setbuffer(GLIBC_2.0)[LSB]	xdrrec_endofrecord(GLIBC_2.0)[RPC & XDR]
getpid(GLIBC_2.0)[SUSv3]	setcontext(GLIBC_2.0)[SUSv3]	xdrrec_eof(GLIBC_2.0)[SVID.4]
getppid(GLIBC_2.0)[SUSv3]	setgid(GLIBC_2.0)[SUSv3]	xdrrec_skiprecord(GLIBC_2.0)[RPC & XDR]
getpriority(GLIBC_2.0)[SUSv3]	setenv(GLIBC_2.0)[SUSv3]	xdrstdio_create(GLIBC_2.0)[LSB]
getprotobyname(GLIBC_2.0)[SUSv3]	seteuid(GLIBC_2.0)[SUSv3]	

Table A-2 libc Data Interfaces

__daylight[LSB]	__tzname[LSB]	in6addr_loopback[SUSv3]
__environ[LSB]	_sys_errlist[LSB]	
__timezone[LSB]	in6addr_any[SUSv3]	

A.2 libcrypt

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

POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]

Table A-3 libcrypt Function Interfaces

crypt(GLIBC_2.0)[SUSv3]	encrypt(GLIBC_2.0)[SUSv3]	setkey(GLIBC_2.0)[SUSv3]
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A.3 libdl

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

ISO/IEC 23360 Part 1 [LSB]

POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]

Table A-4 libdl Function Interfaces

dldaddr(GLIBC_2.0)[LSB]	dlderror(GLIBC_2.0)[SUSv3]	dldsym(GLIBC_2.0)[LSB]
dldclose(GLIBC_2.0)[SUSv3]	dldopen(GLIBC_2.1)[LSB]	dldvsym(GLIBC_2.1)[LSB]

A.4 libgcc_s

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

ISO/IEC 23360 Part 1 [LSB]

Table A-5 libgcc_s Function Interfaces

_Unwind_Backtrace(GCC_3.3)[LSB]	_Unwind_GetDataRelBase(GCC_3.0)[LSB]	_Unwind_RaiseException(GCC_3.0)[LSB]
_Unwind_DeleteException(GCC_3.0)[LSB]	_Unwind_GetGR(GCC_3.0)[LSB]	_Unwind_Resume(GCC_3.0)[LSB]
_Unwind_FindEnclosingFunction(GCC_3.3)[LSB]	_Unwind_GetIP(GCC_3.0)[LSB]	_Unwind_Resume_or_Rethrow(GCC_3.3)[LSB]
_Unwind_Find_FDE(GCC_3.0)[LSB]	_Unwind_GetLanguageSpecificData(GCC_3.0)[LSB]	_Unwind_SetGR(GCC_3.0)[LSB]
_Unwind_ForceUnwind	_Unwind_GetRegionStart	_Unwind_SetIP(GCC_3.0)

nd(GCC_3.0)[LSB]	rt(GCC_3.0)[LSB]	0)[LSB]
_Unwind_GetCFA(GCC_3.3)[LSB]	_Unwind_GetTextRelBase(GCC_3.0)[LSB]	

A.5 libm

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

ISO/IEC 23360 Part 1 [LSB]

POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]

Table A-6 libm Function Interfaces

__finite(GLIBC_2.1)[LSB]	csinhl(GLIBC_2.1)[SUSv3]	llround(GLIBC_2.1)[SUSv3]
__finitef(GLIBC_2.1)[LSB]	csinl(GLIBC_2.1)[SUSv3]	llroundf(GLIBC_2.1)[SUSv3]
__finitel(GLIBC_2.1)[LSB]	csqrt(GLIBC_2.1)[SUSv3]	llroundl(GLIBC_2.1)[SUSv3]
__fpclassify(GLIBC_2.1)[LSB]	csqrtf(GLIBC_2.1)[SUSv3]	log(GLIBC_2.0)[SUSv3]
__fpclassifyf(GLIBC_2.1)[LSB]	csqrtl(GLIBC_2.1)[SUSv3]	log10(GLIBC_2.0)[SUSv3]
__fpclassifyl(GLIBC_2.1)[LSB]	ctan(GLIBC_2.1)[SUSv3]	log10f(GLIBC_2.0)[SUSv3]
__signbit(GLIBC_2.1)[LSB]	ctanf(GLIBC_2.1)[SUSv3]	log10l(GLIBC_2.0)[SUSv3]
__signbitf(GLIBC_2.1)[LSB]	ctanh(GLIBC_2.1)[SUSv3]	log1p(GLIBC_2.0)[SUSv3]
__signbitl(GLIBC_2.1)[LSB]	ctanhf(GLIBC_2.1)[SUSv3]	log1pf(GLIBC_2.0)[SUSv3]
acos(GLIBC_2.0)[SUSv3]	ctanhl(GLIBC_2.1)[SUSv3]	log1pl(GLIBC_2.0)[SUSv3]
acosf(GLIBC_2.0)[SUSv3]	ctanl(GLIBC_2.1)[SUSv3]	log2(GLIBC_2.1)[SUSv3]
acosh(GLIBC_2.0)[SUSv3]	drem(GLIBC_2.0)[LSB]	log2f(GLIBC_2.1)[SUSv3]
acoshf(GLIBC_2.0)[SUSv3]	dremf(GLIBC_2.0)[LSB]	log2l(GLIBC_2.1)[SUSv3]
acoshl(GLIBC_2.0)[SUSv3]	dreml(GLIBC_2.0)[LSB]	logb(GLIBC_2.0)[SUSv3]
acosl(GLIBC_2.0)[SUSv3]	erf(GLIBC_2.0)[SUSv3]	logbf(GLIBC_2.0)[SUSv3]
asin(GLIBC_2.0)[SUSv3]	erfc(GLIBC_2.0)[SUSv3]	logbl(GLIBC_2.0)[SUSv3]

asinf(GLIBC_2.0)[SUSv3]	erfcf(GLIBC_2.0)[SUSv3]	logf(GLIBC_2.0)[SUSv3]
asinh(GLIBC_2.0)[SUSv3]	erfcl(GLIBC_2.0)[SUSv3]	logl(GLIBC_2.0)[SUSv3]
asinhf(GLIBC_2.0)[SUSv3]	erff(GLIBC_2.0)[SUSv3]	lrint(GLIBC_2.1)[SUSv3]
asinhf(GLIBC_2.0)[SUSv3]	erfl(GLIBC_2.0)[SUSv3]	lrintf(GLIBC_2.1)[SUSv3]
asinl(GLIBC_2.0)[SUSv3]	exp(GLIBC_2.0)[SUSv3]	lrintl(GLIBC_2.1)[SUSv3]
atan(GLIBC_2.0)[SUSv3]	exp10(GLIBC_2.1)[LSB]	lround(GLIBC_2.1)[SUSv3]
atan2(GLIBC_2.0)[SUSv3]	exp10f(GLIBC_2.1)[LSB]	lroundf(GLIBC_2.1)[SUSv3]
atan2f(GLIBC_2.0)[SUSv3]	exp10l(GLIBC_2.1)[LSB]	lroundl(GLIBC_2.1)[SUSv3]
atan2l(GLIBC_2.0)[SUSv3]	exp2(GLIBC_2.1)[SUSv3]	matherr(GLIBC_2.0)[LSB]
atanf(GLIBC_2.0)[SUSv3]	exp2f(GLIBC_2.1)[SUSv3]	modf(GLIBC_2.0)[SUSv3]
atanh(GLIBC_2.0)[SUSv3]	exp2l(GLIBC_2.1)[SUSv3]	modff(GLIBC_2.0)[SUSv3]
atanhf(GLIBC_2.0)[SUSv3]	expf(GLIBC_2.0)[SUSv3]	modfl(GLIBC_2.0)[SUSv3]
atanhl(GLIBC_2.0)[SUSv3]	expl(GLIBC_2.0)[SUSv3]	nan(GLIBC_2.1)[SUSv3]
atanl(GLIBC_2.0)[SUSv3]	expm1(GLIBC_2.0)[SUSv3]	nanf(GLIBC_2.1)[SUSv3]
cabs(GLIBC_2.1)[SUSv3]	expm1f(GLIBC_2.0)[SUSv3]	nanl(GLIBC_2.1)[SUSv3]
cabsf(GLIBC_2.1)[SUSv3]	expm1l(GLIBC_2.0)[SUSv3]	nearbyint(GLIBC_2.1)[SUSv3]
cabsf(GLIBC_2.1)[SUSv3]	fabs(GLIBC_2.0)[SUSv3]	nearbyintf(GLIBC_2.1)[SUSv3]
cacos(GLIBC_2.1)[SUSv3]	fabsf(GLIBC_2.0)[SUSv3]	nearbyintl(GLIBC_2.1)[SUSv3]
cacosf(GLIBC_2.1)[SUSv3]	fabsl(GLIBC_2.0)[SUSv3]	nextafter(GLIBC_2.0)[SUSv3]
cacosh(GLIBC_2.1)[SUSv3]	fdim(GLIBC_2.1)[SUSv3]	nextafterf(GLIBC_2.0)[SUSv3]
cacoshf(GLIBC_2.1)[SUSv3]	fdimf(GLIBC_2.1)[SUSv3]	nextafterl(GLIBC_2.0)[SUSv3]

cacoshl(GLIBC_2.1)[SUSv3]	fdiml(GLIBC_2.1)[SUSv3]	nexttoward(GLIBC_2.1)[SUSv3]
cacosl(GLIBC_2.1)[SUSv3]	feclearexcept(GLIBC_2.2)[SUSv3]	nexttowardf(GLIBC_2.1)[SUSv3]
carg(GLIBC_2.1)[SUSv3]	fedisableexcept(GLIBC_2.2)[LSB]	nexttowardl(GLIBC_2.1)[SUSv3]
cargf(GLIBC_2.1)[SUSv3]	feenableexcept(GLIBC_2.2)[LSB]	pow(GLIBC_2.0)[SUSv3]
cargl(GLIBC_2.1)[SUSv3]	fegetenv(GLIBC_2.2)[SUSv3]	pow10(GLIBC_2.1)[LSB]
casin(GLIBC_2.1)[SUSv3]	fegetexcept(GLIBC_2.2)[LSB]	pow10f(GLIBC_2.1)[LSB]
casinf(GLIBC_2.1)[SUSv3]	fegetexceptflag(GLIBC_2.2)[SUSv3]	pow10l(GLIBC_2.1)[LSB]
casinh(GLIBC_2.1)[SUSv3]	fegetround(GLIBC_2.1)[SUSv3]	powf(GLIBC_2.0)[SUSv3]
casinhf(GLIBC_2.1)[SUSv3]	feholdexcept(GLIBC_2.1)[SUSv3]	powl(GLIBC_2.0)[SUSv3]
casinhl(GLIBC_2.1)[SUSv3]	feraiseexcept(GLIBC_2.2)[SUSv3]	remainder(GLIBC_2.0)[SUSv3]
casinl(GLIBC_2.1)[SUSv3]	fesetenv(GLIBC_2.2)[SUSv3]	remainderf(GLIBC_2.0)[SUSv3]
catan(GLIBC_2.1)[SUSv3]	fesetexceptflag(GLIBC_2.2)[SUSv3]	remainderl(GLIBC_2.0)[SUSv3]
catanf(GLIBC_2.1)[SUSv3]	fesetround(GLIBC_2.1)[SUSv3]	remquo(GLIBC_2.1)[SUSv3]
catanh(GLIBC_2.1)[SUSv3]	fetestexcept(GLIBC_2.1)[SUSv3]	remquof(GLIBC_2.1)[SUSv3]
catanhf(GLIBC_2.1)[SUSv3]	feupdateenv(GLIBC_2.2)[SUSv3]	remquol(GLIBC_2.1)[SUSv3]
catanhl(GLIBC_2.1)[SUSv3]	finite(GLIBC_2.0)[LSB]	rint(GLIBC_2.0)[SUSv3]
catanl(GLIBC_2.1)[SUSv3]	finitf(GLIBC_2.0)[LSB]	rintf(GLIBC_2.0)[SUSv3]
cbrt(GLIBC_2.0)[SUSv3]	finitel(GLIBC_2.0)[LSB]	rintl(GLIBC_2.0)[SUSv3]
cbrtf(GLIBC_2.0)[SUSv3]	floor(GLIBC_2.0)[SUSv3]	round(GLIBC_2.1)[SUSv3]
cbrtl(GLIBC_2.0)[SUSv3]	floorf(GLIBC_2.0)[SUSv3]	roundf(GLIBC_2.1)[SUSv3]
ccos(GLIBC_2.1)[SUSv3]	floorl(GLIBC_2.0)[SUSv3]	roundl(GLIBC_2.1)[SUSv3]

ccosf(GLIBC_2.1)[SUSv3]	fma(GLIBC_2.1)[SUSv3]	scalb(GLIBC_2.0)[SUSv3]
ccosh(GLIBC_2.1)[SUSv3]	fmaf(GLIBC_2.1)[SUSv3]	scalbf(GLIBC_2.0)[LSB]
ccoshf(GLIBC_2.1)[SUSv3]	fmal(GLIBC_2.1)[SUSv3]	scalbl(GLIBC_2.0)[LSB]
ccoshl(GLIBC_2.1)[SUSv3]	fmax(GLIBC_2.1)[SUSv3]	scalbln(GLIBC_2.1)[SUSv3]
ccosl(GLIBC_2.1)[SUSv3]	fmaxf(GLIBC_2.1)[SUSv3]	scalblnf(GLIBC_2.1)[SUSv3]
ceil(GLIBC_2.0)[SUSv3]	fmaxl(GLIBC_2.1)[SUSv3]	scalblnl(GLIBC_2.1)[SUSv3]
ceilf(GLIBC_2.0)[SUSv3]	fmin(GLIBC_2.1)[SUSv3]	scalbn(GLIBC_2.0)[SUSv3]
ceilf(GLIBC_2.0)[SUSv3]	fminf(GLIBC_2.1)[SUSv3]	scalbnf(GLIBC_2.0)[SUSv3]
cexp(GLIBC_2.1)[SUSv3]	fminl(GLIBC_2.1)[SUSv3]	scalbnl(GLIBC_2.0)[SUSv3]
cexpf(GLIBC_2.1)[SUSv3]	fmod(GLIBC_2.0)[SUSv3]	significand(GLIBC_2.0)[LSB]
cexpl(GLIBC_2.1)[SUSv3]	fmodf(GLIBC_2.0)[SUSv3]	significandf(GLIBC_2.0)[LSB]
cimag(GLIBC_2.1)[SUSv3]	fmodl(GLIBC_2.0)[SUSv3]	significandl(GLIBC_2.0)[LSB]
cimagf(GLIBC_2.1)[SUSv3]	frexp(GLIBC_2.0)[SUSv3]	sin(GLIBC_2.0)[SUSv3]
cimagl(GLIBC_2.1)[SUSv3]	frexpf(GLIBC_2.0)[SUSv3]	sincos(GLIBC_2.1)[LSB]
clog(GLIBC_2.1)[SUSv3]	frexpl(GLIBC_2.0)[SUSv3]	sincosf(GLIBC_2.1)[LSB]
clog10(GLIBC_2.1)[LSB]	gamma(GLIBC_2.0)[LSB]	sincosl(GLIBC_2.1)[LSB]
clog10f(GLIBC_2.1)[LSB]	gammaf(GLIBC_2.0)[LSB]	sinf(GLIBC_2.0)[SUSv3]
clog10l(GLIBC_2.1)[LSB]	gammal(GLIBC_2.0)[LSB]	sinh(GLIBC_2.0)[SUSv3]
clogf(GLIBC_2.1)[SUSv3]	hypot(GLIBC_2.0)[SUSv3]	sinhf(GLIBC_2.0)[SUSv3]
clogl(GLIBC_2.1)[SUSv3]	hypotf(GLIBC_2.0)[SUSv3]	sinhl(GLIBC_2.0)[SUSv3]
conj(GLIBC_2.1)[SUSv3]	hypotl(GLIBC_2.0)[SUSv3]	sinl(GLIBC_2.0)[SUSv3]

conjf(GLIBC_2.1)[SUSv3]	ilogb(GLIBC_2.0)[SUSv3]	sqrt(GLIBC_2.0)[SUSv3]
conjl(GLIBC_2.1)[SUSv3]	ilogbf(GLIBC_2.0)[SUSv3]	sqrtf(GLIBC_2.0)[SUSv3]
copysign(GLIBC_2.0)[SUSv3]	ilogbl(GLIBC_2.0)[SUSv3]	sqrtrl(GLIBC_2.0)[SUSv3]
copysignf(GLIBC_2.0)[SUSv3]	j0(GLIBC_2.0)[SUSv3]	tan(GLIBC_2.0)[SUSv3]
copysignl(GLIBC_2.0)[SUSv3]	j0f(GLIBC_2.0)[LSB]	tanf(GLIBC_2.0)[SUSv3]
cos(GLIBC_2.0)[SUSv3]	j0l(GLIBC_2.0)[LSB]	tanh(GLIBC_2.0)[SUSv3]
cosf(GLIBC_2.0)[SUSv3]	j1(GLIBC_2.0)[SUSv3]	tanhf(GLIBC_2.0)[SUSv3]
cosh(GLIBC_2.0)[SUSv3]	j1f(GLIBC_2.0)[LSB]	tanhf(GLIBC_2.0)[SUSv3]
coshf(GLIBC_2.0)[SUSv3]	j1l(GLIBC_2.0)[LSB]	tanl(GLIBC_2.0)[SUSv3]
coshl(GLIBC_2.0)[SUSv3]	jnl(GLIBC_2.0)[SUSv3]	tgamma(GLIBC_2.1)[SUSv3]
cosl(GLIBC_2.0)[SUSv3]	jnf(GLIBC_2.0)[LSB]	tgammaf(GLIBC_2.1)[SUSv3]
cpow(GLIBC_2.1)[SUSv3]	jnl(GLIBC_2.0)[LSB]	tgammal(GLIBC_2.1)[SUSv3]
cpowf(GLIBC_2.1)[SUSv3]	ldexp(GLIBC_2.0)[SUSv3]	trunc(GLIBC_2.1)[SUSv3]
cpowl(GLIBC_2.1)[SUSv3]	ldexpf(GLIBC_2.0)[SUSv3]	truncf(GLIBC_2.1)[SUSv3]
cproj(GLIBC_2.1)[SUSv3]	ldexpl(GLIBC_2.0)[SUSv3]	truncl(GLIBC_2.1)[SUSv3]
cprojf(GLIBC_2.1)[SUSv3]	lgamma(GLIBC_2.0)[SUSv3]	y0(GLIBC_2.0)[SUSv3]
cprojl(GLIBC_2.1)[SUSv3]	lgamma_r(GLIBC_2.0)[LSB]	y0f(GLIBC_2.0)[LSB]
creal(GLIBC_2.1)[SUSv3]	lgammaf(GLIBC_2.0)[SUSv3]	y0l(GLIBC_2.0)[LSB]
crealf(GLIBC_2.1)[SUSv3]	lgammaf_r(GLIBC_2.0)[LSB]	y1(GLIBC_2.0)[SUSv3]
creall(GLIBC_2.1)[SUSv3]	lgammal(GLIBC_2.0)[SUSv3]	y1f(GLIBC_2.0)[LSB]
csin(GLIBC_2.1)[SUSv3]	lgammal_r(GLIBC_2.0)[LSB]	y1l(GLIBC_2.0)[LSB]

<code>csinf(GLIBC_2.1)[SUSv3]</code>	<code>llrint(GLIBC_2.1)[SUSv3]</code>	<code>yn(GLIBC_2.0)[SUSv3]</code>
<code>csinh(GLIBC_2.1)[SUSv3]</code>	<code>llrintf(GLIBC_2.1)[SUSv3]</code>	<code>ynf(GLIBC_2.0)[LSB]</code>
<code>csinhf(GLIBC_2.1)[SUSv3]</code>	<code>llrintl(GLIBC_2.1)[SUSv3]</code>	<code>ynl(GLIBC_2.0)[LSB]</code>

Table A-7 libm Data Interfaces

<code>signgam[SUSv3]</code>		
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A.6 libpthread

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

Large File Support [LFS]
ISO/IEC 23360 Part 1 [LSB]
POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]

Table A-8 libpthread Function Interfaces

<code>_pthread_cleanup_pop(GLIBC_2.0)[LSB]</code>	<code>pthread_cond_wait(GLIBC_2.3.2)[SUSv3]</code>	<code>pthread_rwlock_timedwrlock(GLIBC_2.2)[SUSv3]</code>
<code>_pthread_cleanup_push(GLIBC_2.0)[LSB]</code>	<code>pthread_condattr_destroy(GLIBC_2.0)[SUSv3]</code>	<code>pthread_rwlock_tryrdlock(GLIBC_2.1)[SUSv3]</code>
<code>lseek64(GLIBC_2.2)[LFS]</code>	<code>pthread_condattr_getshared(GLIBC_2.2)[SUSv3]</code>	<code>pthread_rwlock_trywrlock(GLIBC_2.1)[SUSv3]</code>
<code>open64(GLIBC_2.2)[LFS]</code>	<code>pthread_condattr_init(GLIBC_2.0)[SUSv3]</code>	<code>pthread_rwlock_unlock(GLIBC_2.1)[SUSv3]</code>
<code>pread(GLIBC_2.2)[SUSv3]</code>	<code>pthread_condattr_setshared(GLIBC_2.2)[SUSv3]</code>	<code>pthread_rwlock_wrlock(GLIBC_2.1)[SUSv3]</code>
<code>pread64(GLIBC_2.2)[LSB]</code>	<code>pthread_create(GLIBC_2.1)[SUSv3]</code>	<code>pthread_rwlockattr_destroy(GLIBC_2.1)[SUSv3]</code>
<code>pthread_attr_destroy(GLIBC_2.0)[SUSv3]</code>	<code>pthread_detach(GLIBC_2.0)[SUSv3]</code>	<code>pthread_rwlockattr_getkind_np(GLIBC_2.1)[LSB]</code>
<code>pthread_attr_getdetachstate(GLIBC_2.0)[SUSv3]</code>	<code>pthread_equal(GLIBC_2.0)[SUSv3]</code>	<code>pthread_rwlockattr_getpshared(GLIBC_2.1)[SUSv3]</code>
<code>pthread_attr_getguardsize(GLIBC_2.1)[SUSv3]</code>	<code>pthread_exit(GLIBC_2.0)[SUSv3]</code>	<code>pthread_rwlockattr_init(GLIBC_2.1)[SUSv3]</code>
<code>pthread_attr_getinheritsched(GLIBC_2.0)[SUSv3]</code>	<code>pthread_getattr_np(GLIBC_2.2.3)[LSB]</code>	<code>pthread_rwlockattr_setkind_np(GLIBC_2.1)[LSB]</code>

pthread_attr_getschedparam(GLIBC_2.0)[SUSv3]	pthread_getconcurrency(GLIBC_2.1)[SUSv3]	pthread_rwlockattr_setpshared(GLIBC_2.1)[SUSv3]
pthread_attr_getschedpolicy(GLIBC_2.0)[SUSv3]	pthread_getcpuclockid(GLIBC_2.2)[SUSv3]	pthread_self(GLIBC_2.0)[SUSv3]
pthread_attr_getscope(GLIBC_2.0)[SUSv3]	pthread_getschedparam(GLIBC_2.0)[SUSv3]	pthread_setcancelstate(GLIBC_2.0)[SUSv3]
pthread_attr_getstack(GLIBC_2.2)[SUSv3]	pthread_getspecific(GLIBC_2.0)[SUSv3]	pthread_setcanceltype(GLIBC_2.0)[SUSv3]
pthread_attr_getstackaddr(GLIBC_2.1)[SUSv3]	pthread_join(GLIBC_2.0)[SUSv3]	pthread_setconcurrency(GLIBC_2.1)[SUSv3]
pthread_attr_getstacksize(GLIBC_2.1)[SUSv3]	pthread_key_create(GLIBC_2.0)[SUSv3]	pthread_setschedparam(GLIBC_2.0)[SUSv3]
pthread_attr_init(GLIBC_2.1)[SUSv3]	pthread_key_delete(GLIBC_2.0)[SUSv3]	pthread_setspecific(GLIBC_2.0)[SUSv3]
pthread_attr_setdetachstate(GLIBC_2.0)[SUSv3]	pthread_kill(GLIBC_2.0)[SUSv3]	pthread_sigmask(GLIBC_2.0)[SUSv3]
pthread_attr_setguardsize(GLIBC_2.1)[SUSv3]	pthread_mutex_consistent_np(GLIBC_2.4)[LSB]	pthread_spin_destroy(GLIBC_2.2)[SUSv3]
pthread_attr_setinheritsched(GLIBC_2.0)[SUSv3]	pthread_mutex_destroy(GLIBC_2.0)[SUSv3]	pthread_spin_init(GLIBC_2.2)[SUSv3]
pthread_attr_setschedparam(GLIBC_2.0)[SUSv3]	pthread_mutex_init(GLIBC_2.0)[SUSv3]	pthread_spin_lock(GLIBC_2.2)[SUSv3]
pthread_attr_setschedpolicy(GLIBC_2.0)[SUSv3]	pthread_mutex_lock(GLIBC_2.0)[SUSv3]	pthread_spin_trylock(GLIBC_2.2)[SUSv3]
pthread_attr_setscope(GLIBC_2.0)[SUSv3]	pthread_mutex_timedlock(GLIBC_2.2)[SUSv3]	pthread_spin_unlock(GLIBC_2.2)[SUSv3]
pthread_attr_setstack(GLIBC_2.2)[SUSv3]	pthread_mutex_trylock(GLIBC_2.0)[SUSv3]	pthread_testcancel(GLIBC_2.0)[SUSv3]
pthread_attr_setstackaddr(GLIBC_2.1)[SUSv3]	pthread_mutex_unlock(GLIBC_2.0)[SUSv3]	pwrite(GLIBC_2.2)[SUSv3]
pthread_attr_setstacksize(GLIBC_2.1)[SUSv3]	pthread_mutexattr_destroy(GLIBC_2.0)[SUSv3]	pwrite64(GLIBC_2.2)[LSB]
pthread_barrier_destroy(GLIBC_2.2)[SUSv3]	pthread_mutexattr_getpshared(GLIBC_2.2)[SUSv3]	sem_close(GLIBC_2.1.1)[SUSv3]
pthread_barrier_init(GLIBC_2.2)[SUSv3]	pthread_mutexattr_getrobust_np(GLIBC_2.4)[LSB]	sem_destroy(GLIBC_2.1)[SUSv3]

pthread_barrier_wait(GLIBC_2.2)[SUSv3]	pthread_mutexattr_gettype(GLIBC_2.1)[SUSv3]	sem_getvalue(GLIBC_2.1)[SUSv3]
pthread_barrierattr_destroy(GLIBC_2.2)[SUSv3]	pthread_mutexattr_init(GLIBC_2.0)[SUSv3]	sem_init(GLIBC_2.1)[SUSv3]
pthread_barrierattr_init(GLIBC_2.2)[SUSv3]	pthread_mutexattr_setpshared(GLIBC_2.2)[SUSv3]	sem_open(GLIBC_2.1.1)[SUSv3]
pthread_barrierattr_setpshared(GLIBC_2.2)[SUSv3]	pthread_mutexattr_setrobust_np(GLIBC_2.4)[LSB]	sem_post(GLIBC_2.1)[SUSv3]
pthread_cancel(GLIBC_2.0)[SUSv3]	pthread_mutexattr_settype(GLIBC_2.1)[SUSv3]	sem_timedwait(GLIBC_2.2)[SUSv3]
pthread_cond_broadcast(GLIBC_2.3.2)[SUSv3]	pthread_once(GLIBC_2.0)[SUSv3]	sem_trywait(GLIBC_2.1)[SUSv3]
pthread_cond_destroy(GLIBC_2.3.2)[SUSv3]	pthread_rwlock_destroy(GLIBC_2.1)[SUSv3]	sem_unlink(GLIBC_2.1.1)[SUSv3]
pthread_cond_init(GLIBC_2.3.2)[SUSv3]	pthread_rwlock_init(GLIBC_2.1)[SUSv3]	sem_wait(GLIBC_2.1)[SUSv3]
pthread_cond_signal(GLIBC_2.3.2)[SUSv3]	pthread_rwlock_rdlock(GLIBC_2.1)[SUSv3]	
pthread_cond_timedwait(GLIBC_2.3.2)[SUSv3]	pthread_rwlock_timedrdlock(GLIBC_2.2)[SUSv3]	

A.7 librt

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

POSIX 1003.1-2001 (ISO/IEC 9945-2003) [SUSv3]

Table A-9 librt Function Interfaces

clock_getcpuclockid(GLIBC_2.2)[SUSv3]	clock_settime(GLIBC_2.2)[SUSv3]	timer_delete(GLIBC_2.2)[SUSv3]
clock_getres(GLIBC_2.2)[SUSv3]	shm_open(GLIBC_2.2)[SUSv3]	timer_getoverrun(GLIBC_2.2)[SUSv3]
clock_gettime(GLIBC_2.2)[SUSv3]	shm_unlink(GLIBC_2.2)[SUSv3]	timer_gettime(GLIBC_2.2)[SUSv3]
clock_nanosleep(GLIBC_2.2)[SUSv3]	timer_create(GLIBC_2.2)[SUSv3]	timer_settime(GLIBC_2.2)[SUSv3]

A.8 libutil

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

ISO/IEC 23360 Part 1 [LSB]

Table A-10 libutil Function Interfaces

forkpty(GLIBC_2.0)[LSB]	login_tty(GLIBC_2.0)[LSB]	logwtmp(GLIBC_2.0)[LSB]
login(GLIBC_2.0)[LSB]	logout(GLIBC_2.0)[LSB]	openpty(GLIBC_2.0)[LSB]

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