INTERNATIONAL STANDARD

ISO/IEC 23360-2-2

First edition
2021-10

Linux Standard Base (LSB) —

Part 2-2:
Core specification for X86-32 architecture

Reference number
ISO/IEC 23360-2-2:2021(E)

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents) or the IEC list of patent declarations received (see patents.iec.ch).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html. In the IEC, see www.iec.ch/understanding-standards.

This document was prepared by the Linux Foundation as Linux Standard Base (LSB): Core specification for X86-32 architecture and drafted in accordance with its editorial rules. It was assigned to Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 22, *Programming languages, their environments and system software interfaces*, and adopted by National Bodies.

This first edition of ISO/IEC 23360-2-2 cancels and replaces ISO/IEC 23360-2:2006, which has been technically revised.

This document is based on “The GNU Free Documentation License, version 1.1”. The license is available at https://www.gnu.org/licenses/old-licenses/fdl-1.1.html.

A list of all parts in the ISO/IEC 23660 series can be found on the ISO and IEC websites.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html and www.iec.ch/national-committees.

Contents

Foreword ... **iii**
Introduction ... **vi**
I Introductory Elements ... **1**
1 Scope ... 2
2 References ... 3
2.1 Normative References ... 3
2.2 Informative References/Bibliography ... 5
3 Requirements ... 8
3.1 Relevant Libraries ... 8
3.2 LSB Implementation Conformance ... 8
3.3 LSB Application Conformance ... 9
4 Terms and Definitions ... 11
5 Documentation Conventions ... 13
II Executable and Linking Format (ELF) ... **14**
6 Introduction ... 15
7 Low Level System Information ... 16
7.1 Machine Interface ... 16
7.2 Function Calling Sequence ... 17
7.3 Operating System Interface ... 18
7.4 Process Initialization ... 19
7.5 Coding Examples ... 20
7.6 C Stack Frame ... 21
7.7 Debug Information ... 21
8 Object Format ... 22
8.1 Introduction ... 22
8.2 ELF Header ... 22
8.3 Special Sections ... 22
8.4 Symbol Table ... 23
8.5 Relocation ... 23
9 Program Loading and Dynamic Linking ... 24
9.1 Introduction ... 24
9.2 Program Header ... 24
9.3 Program Loading ... 24
9.4 Dynamic Linking ... 24
III Base Libraries ... **26**
10 Libraries ... 27
10.1 Program Interpreter/Dynamic Linker ... 27
10.2 Interfaces for libc ... 27
10.3 Data Definitions for libc ... 47
10.4 Interface Definitions for libc ... 66
10.5 Interfaces for libm ... 68
10.6 Data Definitions for libm ... 73
10.7 Interface Definitions for libm ... 74
10.8 Interfaces for libpthread ... 75
10.9 Data Definitions for libpthread ... 80
10.10 Interfaces for libgcc_s ... 82
10.11 Data Definitions for libgcc_s ... 82
10.12 Interface Definitions for libgcc_s ... 83
10.13 Interfaces for libdl ... 84
10.14 Data Definitions for libdl ... 84
10.15 Interfaces for libcrypt ... 85
10.16 Data Definitions for libcrypt ... 85
IV Utility Libraries ... **87**
11 Libraries ... 88

11.1 Interfaces for libz 88
11.2 Data Definitions for libz 88
11.3 Interfaces for libncurses 89
11.4 Data Definitions for libncurses 89
11.5 Interfaces for libncursesw 89
11.6 Data Definitions for libncursesw 90
11.7 Interfaces for libutil 90
V Base Libraries 92
12 Libraries 93
12.1 Interfaces for libstdcxx 93
12.2 Interface Definitions for libstdcxx 203
VI Package Format and Installation 204
13 Software Installation 205
13.1 Package Dependencies 205
13.2 Package Architecture Considerations 205
Annex A Alphabetical Listing of Interfaces by Library 206
A.1 libc 206
A.2 libcrypt 221
A.3 libdl 221
A.4 libgcc_s 222
A.5 libm 222
A.6 libpthread 227
A.7 librt 230
A.8 libutil 231

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

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 part describing those parts of the interface that remain constant across all implementations of the LSB, and an architecture-specific part describing the parts of the interface that vary by processor architecture. Together, the common part and the relevant architecture-specific part for a single hardware architecture provide a complete interface specification for compiled application programs on systems that share a common hardware architecture.

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.

This is the X86 architecture specific part of the Core module of the Linux Standard Base (LSB). This part supplements the common part of the LSB Core module with those interfaces that differ between architectures.

This part should be used in conjunction with LSB Core - Generic, the common part. Whenever a section of the common part is supplemented by architecture-specific information, the common part includes a reference to the architecture-specific part. This part may also contain additional information that is not referenced in the common part.

Interfaces described in this part of the LSB Core Specification are mandatory except where explicitly listed otherwise. Interfaces described in the LSB Core module are supplemented by other LSB modules. All other modules depend on the presence of LSB Core.

2 References

2.1 Normative References

The following specifications are incorporated by reference into this specification. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced specification (including any amendments) applies.

> **Note:** Where copies of a referenced specification are available on the World Wide Web, a Uniform Resource Locator (URL) is given, for informative purposes only. Such URL might at any given time resolve to a more recent copy of the specification, or be out of date (not resolve). Reference copies of specifications at the revision level indicated may be found at the Linux Foundation's Reference Specifications (http://refspecs.linuxbase.org) site.

Table 2-1 Normative References

Name	Title	URL
LSB Core - Generic	Linux Standard Base - Core Specification - Generic	http://www.linuxbase.org/spec/
Filesystem Hierarchy Standard	Filesystem Hierarchy Standard (FHS) 3.0	http://refspecs.linuxbase.org/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	
ISO/IEC 14882: 2003 C++ Language	ISO/IEC 14882: 2003 Programming languages --C++	
Itanium™ C++ ABI	Itanium™ C++ ABI (Revision 1.86)	http://refspecs.linuxfoundation.org/cxxabi-1.86.html
Large File Support	Large File Support	http://www.UNIX-systems.org/version2/

Name	Title	URL
		whatsnew/lfs20mar.html
Libncursesw API	Libncursesw API	http://invisible-island.net/ncurses/man/ncurses.3x.html
Libncursesw Placeholder	Libncursesw Specification Placeholder	http://refspecs.linux-foundation.org/libncursesw/libncurses.html
POSIX 1003.1-2001 (ISO/IEC 9945-2003)	ISO/IEC 9945-1:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 1: Base Definitions ISO/IEC 9945-2:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 2: System Interfaces ISO/IEC 9945-3:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 3: Shell and Utilities ISO/IEC 9945-4:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 4: Rationale Including Technical Cor. 1: 2004	http://www.unix.org/version3/
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

Name	Title	URL
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, Edition 4.1	http://www.sco.com/developers/devspecs/gabi41.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, Issue 7	X/Open Curses, Issue 7 (ISBN: 1-931624-83-6, The Open Group, November 2009)	https://www2.opengroup.org/ogsys/catalog/C094

2.2 Informative References/Bibliography

The documents listed below provide essential background information to implementors of this specification. These references are included for information only, and do not represent normative parts of this specification.

Table 2-2 Other References

Name	Title	URL
DWARF Debugging Information Format, Version 4	DWARF Debugging Information Format, Version 4 (June 10, 2010)	http://www.dwarfstd.org/doc/DWARF4.pdf
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	

Name	Title	URL
ITU-T V.42	International Telecommunication Union Recommendation V.42 (2002): Error-correcting procedures for DCEs using asynchronous-to-synchronous conversionITUV	http://www.itu.int/rec/recommendation.asp?type=folders&lang=e&parent=T-REC-V.42
Li18nux Globalization Specification	LI18NUX 2000 Globalization Specification, Version 1.0 with Amendment 4	http://www.openi18n.org/docs/html/LI18NUX-2000-amd4.htm
Linux Allocated Device Registry	LINUX ALLOCATED DEVICES	http://www.lanana.org/docs/device-list/devices-2.6+.txt
Linux Assigned Names And Numbers Authority	Linux Assigned Names And Numbers Authority	http://www.lanana.org/
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 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 Specication	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

Name	Title	URL
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 Message Format	IETF RFC 2822: Internet Message Format	http://www.ietf.org/rfc/rfc2822.txt
RFC 5531/4506 RPC & XDR	IETF RFC 5531 & 4506	http://www.ietf.org/
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
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 (LSB Core - Generic) 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
libc	libc.so.6
libcrypt	libcrypt.so.1
libdl	libdl.so.2
libgcc_s	libgcc_s.so.1
libm	libm.so.6
libncurses	libncurses.so.5
libncursesw	libncursesw.so.5
libpthread	libpthread.so.0
libstdcxx	libstdc++.so.6
libutil	libutil.so.1
libz	libz.so.1
proginterp	/lib/ld-lsb.so.3

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 (LSB Core - Generic) and the relevant architecture specific part of the LSB Core Specification.

> **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 the LSB Core Specification 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 specification.
- The implementation shall provide libraries containing the interfaces specified by this specification, 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 specification.
- The map of virtual memory provided by the implementation shall conform to the requirements of this specification.
- 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 specification.
- 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 specification in the format defined here and in other documents normatively included by reference. All commands and utilities shall behave as required by this specification. The implementation shall also provide all mandatory components of an application's runtime environment that are included or referenced in this specification.
- 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 containing object files is necessarily architecture specific, and must conform to both the generic LSB Core specification (LSB Core - Generic) and the relevant architecture specific part of the LSB Core Specification. A conforming application which contains no object files may be architecture neutral. Architecture neutral applications shall conform only to the requirements of the generic LSB Core specification (LSB Core - Generic).

A conforming application shall satisfy the following requirements:

- Executable files shall be either object files in the format defined in the Object Format section of this specification, or script files in a scripting language where the interpreter is required by this specification.
- Object files shall participate in dynamic linking as defined in the Program Loading and Linking section of this specification.
- Object files shall employ only the instructions, traps, and other low-level facilities defined as being for use by applications in the Low-Level System Information section of this specification

- If the application requires any optional interface defined in this specification in order to be installed or to execute successfully, the requirement for that optional interface shall be stated in the application's documentation.
- The application shall not use any interface or data format that is not required to be provided by a conforming implementation, unless such an interface or data format is supplied by another application through direct invocation of that application during execution. The other application must also be a conforming application, and the use of such interface or data format, as well as its source (in other words, the other conforming application), shall be identified in the documentation of the application.
- The application 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 not defined in this specification in order to be installed or to execute successfully.

4 Terms and Definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 2382, ISO 80000–2, and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4.1

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.

4.2

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.

4.3

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.

4.4

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.

4.5

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.

4.6

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.

4.7

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) [SUSv4]

refers to the interface named `forkpty()` with symbol version `GLIBC_2.0` that is defined in the reference indicated by the tag `SUSv4`.

Note: For symbols with versions which differ between architectures, the symbol versions are defined in the architecture specific parts of of this module specification only. In the generic part, they will appear without symbol versions.

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 double word

Type	C	sizeof	Alignment (bytes)	Intel386 Architecture
	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 1003.1-2008 (ISO/IEC 9945-2009) 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 Guidlines

LSB-conforming applications should follow the coding guidleines 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 provdied 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 1003.1-2008 (ISO/IEC 9945-2009) 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 the Executable and Linking Format (ELF) object file format, as defined by the following documents:

- System V ABI
- System V ABI Update
- System V ABI, IA32 Supplement
- LSB Core - Generic
- this document

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
.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 LSB Core - Generic 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 entrys 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 base libraries which provide interfaces for accessing the operating system, processor and other hardware in the system.

Only interfaces and interface details which are unique to the X86 platform are defined here. This section should be used in conjunction with the corresponding section of LSB Core - Generic.

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] LSB Core - Generic
[RPC + XDR] RFC 5531/4506 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_perrno(GLIBC_2.0) [SVID.4]	clnt_perror(GLIBC_2.0) [SVID.4]	clnt_spcreateerror(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 + XDR]	key_decryptsession(GLIBC_2.1) [SVID.4]	pmap_getport(GLIBC_2.0) [LSB]	pmap_set(GLIBC_2.0) [LSB]
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]
svcfd_create(GLIBC_2.0) [RPC + XDR]	svcraw_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) [SVID.4]			

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) [SUSv4]	acct(GLIBC_2.0) [LSB]	alarm(GLIBC_2.0) [SUSv4]
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) [SUSv4]	chmod(GLIBC_2.0) [SUSv4]	chown(GLIBC_2.1) [SUSv4]	chroot(GLIBC_2.0) [SUSv2]
clock(GLIBC_2.0) [SUSv4]	close(GLIBC_2.0) [SUSv4]	closedir(GLIBC_2.0) [SUSv4]	creat(GLIBC_2.0) [SUSv4]
dup(GLIBC_2.0) [SUSv4]	dup2(GLIBC_2.0) [SUSv4]	execl(GLIBC_2.0) [SUSv4]	execle(GLIBC_2.0) [SUSv4]
execlp(GLIBC_2.0) [SUSv4]	execv(GLIBC_2.0) [SUSv4]	execve(GLIBC_2.0) [SUSv4]	execvp(GLIBC_2.0) [SUSv4]
exit(GLIBC_2.0) [SUSv4]	fchdir(GLIBC_2.0) [SUSv4]	fchmod(GLIBC_2.0) [SUSv4]	fchown(GLIBC_2.0) [SUSv4]
fcntl(GLIBC_2.0) [LSB]	fdatasync(GLIBC_2.0) [SUSv4]	fexecve(GLIBC_2.0) [SUSv4]	flock(GLIBC_2.0) [LSB]
fork(GLIBC_2.0) [SUSv4]	fstatfs(GLIBC_2.0) [LSB]	fstatvfs(GLIBC_2.1) [SUSv4]	fsync(GLIBC_2.0) [SUSv4]
ftime(GLIBC_2.0) [SUSv3]	ftruncate(GLIBC_2.0) [SUSv4]	getcontext(GLIBC_2.1) [SUSv3]	getdtablesize(GLIBC_2.0) [LSB]
getegid(GLIBC_2.0) [SUSv4]	geteuid(GLIBC_2.0) [SUSv4]	getgid(GLIBC_2.0) [SUSv4]	getgroups(GLIBC_2.0) [SUSv4]

getitimer(GLIBC_2.0) [SUSv4]	getloadavg(GLIBC_2.2) [LSB]	getpagesize(GLIBC_2.0) [LSB]	getpgid(GLIBC_2.0) [SUSv4]
getpgrp(GLIBC_2.0) [SUSv4]	getpid(GLIBC_2.0) [SUSv4]	getppid(GLIBC_2.0) [SUSv4]	getpriority(GLIBC_2.0) [SUSv4]
getrlimit(GLIBC_2.2) [LSB]	getrusage(GLIBC_2.0) [SUSv4]	getsid(GLIBC_2.0) [SUSv4]	getuid(GLIBC_2.0) [SUSv4]
getwd(GLIBC_2.0) [SUSv3]	initgroups(GLIBC_2.0) [LSB]	ioctl(GLIBC_2.0) [LSB]	ioperm(GLIBC_2.0) [LSB]
iopl(GLIBC_2.0) [LSB]	kill(GLIBC_2.0) [LSB]	killpg(GLIBC_2.0) [SUSv4]	lchown(GLIBC_2.0) [SUSv4]
link(GLIBC_2.0) [LSB]	lockf(GLIBC_2.0) [SUSv4]	lseek(GLIBC_2.0) [SUSv4]	mkdir(GLIBC_2.0) [SUSv4]
mkfifo(GLIBC_2.0) [SUSv4]	mlock(GLIBC_2.0) [SUSv4]	mlockall(GLIBC_2.0) [SUSv4]	mmap(GLIBC_2.0) [SUSv4]
mprotect(GLIBC_2.0) [SUSv4]	mremap(GLIBC_2.0) [LSB]	msync(GLIBC_2.0) [SUSv4]	munlock(GLIBC_2.0) [SUSv4]
munlockall(GLIBC_2.0) [SUSv4]	munmap(GLIBC_2.0) [SUSv4]	nanosleep(GLIBC_2.0) [SUSv4]	nice(GLIBC_2.0) [SUSv4]
open(GLIBC_2.0) [SUSv4]	opendir(GLIBC_2.0) [SUSv4]	pathconf(GLIBC_2.0) [SUSv4]	pause(GLIBC_2.0) [SUSv4]
pipe(GLIBC_2.0) [SUSv4]	poll(GLIBC_2.0) [SUSv4]	pread(GLIBC_2.1) [SUSv4]	pselect(GLIBC_2.0) [SUSv4]
ptrace(GLIBC_2.0) [LSB]	pwrite(GLIBC_2.1) [SUSv4]	read(GLIBC_2.0) [SUSv4]	readdir(GLIBC_2.0) [SUSv4]
readdir_r(GLIBC_2.0) [SUSv4]	readlink(GLIBC_2.0) [SUSv4]	readv(GLIBC_2.0) [SUSv4]	rename(GLIBC_2.0) [SUSv4]
rmdir(GLIBC_2.0) [SUSv4]	sbrk(GLIBC_2.0) [SUSv2]	sched_get_priority_max(GLIBC_2.0) [SUSv4]	sched_get_priority_min(GLIBC_2.0) [SUSv4]
sched_getparam(GLIBC_2.0) [SUSv4]	sched_getscheduler(GLIBC_2.0) [SUSv4]	sched_rr_get_interval(GLIBC_2.0) [SUSv4]	sched_setparam(GLIBC_2.0) [SUSv4]
sched_setscheduler(GLIBC_2.0) [LSB]	sched_yield(GLIBC_2.0) [SUSv4]	select(GLIBC_2.0) [SUSv4]	setcontext(GLIBC_2.0) [SUSv3]
setegid(GLIBC_2.0) [SUSv4]	seteuid(GLIBC_2.0) [SUSv4]	setgid(GLIBC_2.0) [SUSv4]	setitimer(GLIBC_2.0) [SUSv4]
setpgid(GLIBC_2.0) [SUSv4]	setpgrp(GLIBC_2.0) [SUSv4]	setpriority(GLIBC_2.0) [SUSv4]	setregid(GLIBC_2.0) [SUSv4]
setreuid(GLIBC_2.0) [SUSv4]	setrlimit(GLIBC_2.2) [LSB]	setrlimit64(GLIBC_2.1) [LFS]	setsid(GLIBC_2.0) [SUSv4]
setuid(GLIBC_2.0) [SUSv4]	sleep(GLIBC_2.0) [SUSv4]	statfs(GLIBC_2.0) [LSB]	statvfs(GLIBC_2.1) [SUSv4]

stime(GLIBC_2.0) [LSB]	symlink(GLIBC_2.0) [SUSv4]	sync(GLIBC_2.0) [SUSv4]	sysconf(GLIBC_2.0) [LSB]
sysinfo(GLIBC_2.0) [LSB]	time(GLIBC_2.0) [SUSv4]	times(GLIBC_2.0) [SUSv4]	truncate(GLIBC_2.0) [SUSv4]
ulimit(GLIBC_2.0) [SUSv4]	umask(GLIBC_2.0) [SUSv4]	uname(GLIBC_2.0) [SUSv4]	unlink(GLIBC_2.0) [LSB]
utime(GLIBC_2.0) [SUSv4]	utimes(GLIBC_2.0) [SUSv4]	vfork(GLIBC_2.0) [SUSv3]	wait(GLIBC_2.0) [SUSv4]
wait4(GLIBC_2.0) [LSB]	waitid(GLIBC_2.1) [SUSv4]	waitpid(GLIBC_2.0) [SUSv4]	write(GLIBC_2.0) [SUSv4]
writev(GLIBC_2.0) [SUSv4]			

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) [SUSv4]	clearerr_unlocked(GLIBC_2.0) [LSB]	ctermid(GLIBC_2.0) [SUSv4]
dprintf(GLIBC_2.0) [SUSv4]	fclose(GLIBC_2.1) [SUSv4]	fdopen(GLIBC_2.1) [SUSv4]	feof(GLIBC_2.0) [SUSv4]

feof_unlocked(GLIBC_2.0) [LSB]	ferror(GLIBC_2.0) [SUSv4]	ferror_unlocked(GLIBC_2.0) [LSB]	fflush(GLIBC_2.0) [SUSv4]
fflush_unlocked(GLIBC_2.0) [LSB]	fgetc(GLIBC_2.0) [SUSv4]	fgetc_unlocked(GLIBC_2.1) [LSB]	fgetpos(GLIBC_2.2) [SUSv4]
fgets(GLIBC_2.0) [SUSv4]	fgets_unlocked(GLIBC_2.1) [LSB]	fgetwc_unlocked(GLIBC_2.2) [LSB]	fgetws_unlocked(GLIBC_2.2) [LSB]
fileno(GLIBC_2.0) [SUSv4]	fileno_unlocked(GLIBC_2.0) [LSB]	flockfile(GLIBC_2.0) [SUSv4]	fopen(GLIBC_2.1) [SUSv4]
fprintf(GLIBC_2.0) [SUSv4]	fputc(GLIBC_2.0) [SUSv4]	fputc_unlocked(GLIBC_2.0) [LSB]	fputs(GLIBC_2.0) [SUSv4]
fputs_unlocked(GLIBC_2.1) [LSB]	fputwc_unlocked(GLIBC_2.2) [LSB]	fputws_unlocked(GLIBC_2.2) [LSB]	fread(GLIBC_2.0) [SUSv4]
fread_unlocked(GLIBC_2.1) [LSB]	freopen(GLIBC_2.0) [SUSv4]	fscanf(GLIBC_2.0) [LSB]	fseek(GLIBC_2.0) [SUSv4]
fseeko(GLIBC_2.1) [SUSv4]	fsetpos(GLIBC_2.2) [SUSv4]	ftell(GLIBC_2.0) [SUSv4]	ftello(GLIBC_2.1) [SUSv4]
fwrite(GLIBC_2.0) [SUSv4]	fwrite_unlocked(GLIBC_2.1) [LSB]	getc(GLIBC_2.0) [SUSv4]	getc_unlocked(GLIBC_2.0) [SUSv4]
getchar(GLIBC_2.0) [SUSv4]	getchar_unlocked(GLIBC_2.0) [SUSv4]	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) [SUSv4]
popen(GLIBC_2.1) [SUSv4]	printf(GLIBC_2.0) [SUSv4]	putc(GLIBC_2.0) [SUSv4]	putc_unlocked(GLIBC_2.0) [SUSv4]
putchar(GLIBC_2.0) [SUSv4]	putchar_unlocked(GLIBC_2.0) [SUSv4]	puts(GLIBC_2.0) [SUSv4]	putw(GLIBC_2.0) [SUSv2]
putwc_unlocked(GLIBC_2.2) [LSB]	putwchar_unlocked(GLIBC_2.2) [LSB]	remove(GLIBC_2.0) [SUSv4]	rewind(GLIBC_2.0) [SUSv4]
rewinddir(GLIBC_2.0) [SUSv4]	scanf(GLIBC_2.0) [LSB]	seekdir(GLIBC_2.0) [SUSv4]	setbuf(GLIBC_2.0) [SUSv4]
setbuffer(GLIBC_2.0) [LSB]	setvbuf(GLIBC_2.0) [SUSv4]	snprintf(GLIBC_2.0) [SUSv4]	sprintf(GLIBC_2.0) [SUSv4]
sscanf(GLIBC_2.0) [LSB]	telldir(GLIBC_2.0) [SUSv4]	tempnam(GLIBC_2.0) [SUSv4]	ungetc(GLIBC_2.0) [SUSv4]
vasprintf(GLIBC_2.0) [LSB]	vdprintf(GLIBC_2.0) [SUSv4]	vfprintf(GLIBC_2.0) [SUSv4]	vprintf(GLIBC_2.0) [SUSv4]

vsnprintf(GLIBC_2.0) [SUSv4]	vsprintf(GLIBC_2.0) [SUSv4]		

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) [SUSv4]			

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) [SUSv4]	stdin(GLIBC_2.0) [SUSv4]	stdout(GLIBC_2.0) [SUSv4]	

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) [SUSv4]	raise(GLIBC_2.0) [SUSv4]
sigaction(GLIBC_2.0) [SUSv4]	sigaddset(GLIBC_2.0) [SUSv4]	sigaltstack(GLIBC_2.0) [SUSv4]	sigandset(GLIBC_2.0) [LSB]
sigdelset(GLIBC_2.0) [SUSv4]	sigemptyset(GLIBC_2.0) [SUSv4]	sigfillset(GLIBC_2.0) [SUSv4]	sighold(GLIBC_2.1) [SUSv4]
sigignore(GLIBC_2.1) [SUSv4]	siginterrupt(GLIBC_2.0) [SUSv4]	sigisemptyset(GLIBC_2.0) [LSB]	sigismember(GLIBC_2.0) [SUSv4]
siglongjmp(GLIBC_2.0) [SUSv4]	signal(GLIBC_2.0) [SUSv4]	sigorset(GLIBC_2.0) [LSB]	sigpause(GLIBC_2.0) [LSB]
sigpending(GLIBC_2.0) [SUSv4]	sigprocmask(GLIBC_2.0) [SUSv4]	sigqueue(GLIBC_2.1) [SUSv4]	sigrelse(GLIBC_2.1) [SUSv4]
sigreturn(GLIBC_2.0) [LSB]	sigset(GLIBC_2.1) [SUSv4]	sigsuspend(GLIBC_2.0) [SUSv4]	sigtimedwait(GLIBC_2.1) [SUSv4]

sigwait(GLIBC_2.0) [SUSv4]	sigwaitinfo(GLIBC_2.1) [SUSv4]		

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]			

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]			

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) [SUSv4]	catgets(GLIBC_2.0) [SUSv4]
catopen(GLIBC_2.0) [SUSv4]	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) [SUSv4]	iconv_close(GLIBC_2.1) [SUSv4]
iconv_open(GLIBC_2.1) [SUSv4]	localeconv(GLIBC_2.2) [SUSv4]	ngettext(GLIBC_2.2) [LSB]	nl_langinfo(GLIBC_2.0) [SUSv4]
setlocale(GLIBC_2.0) [SUSv4]	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]			

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_2.15) [SUSv4]	posix_spawn_file_actions_addclose(GLIBC_2.2) [SUSv4]	posix_spawn_file_actions_adddup2(GLIBC_2.2) [SUSv4]	posix_spawn_file_actions_addopen(GLIBC_2.2) [SUSv4]
posix_spawn_file_actions_destroy (GLIBC_2.2) [SUSv4]	posix_spawn_file_actions_init(GLIBC_2.2) [SUSv4]	posix_spawnattr_destroy(GLIBC_2.2) [SUSv4]	posix_spawnattr_getflags(GLIBC_2.2) [SUSv4]
posix_spawnattr_getpgroup(GLIBC_2.2) [SUSv4]	posix_spawnattr_getschedparam(GLIBC_2.2) [SUSv4]	posix_spawnattr_getschedpolicy(GLIBC_2.2) [SUSv4]	posix_spawnattr_getsigdefault(GLIBC_2.2) [SUSv4]
posix_spawnattr_getsigmask(GLIBC_2.2) [SUSv4]	posix_spawnattr_init(GLIBC_2.2) [SUSv4]	posix_spawnattr_setflags(GLIBC_2.2) [SUSv4]	posix_spawnattr_setpgroup(GLIBC_2.2) [SUSv4]
posix_spawnattr_setschedparam(GLIBC_2.2) [SUSv4]	posix_spawnattr_setschedpolicy(GLIBC_2.2) [SUSv4]	posix_spawnattr_setsigdefault(GLIBC_2.2) [SUSv4]	posix_spawnattr_setsigmask(GLIBC_2.2) [SUSv4]
posix_spawnp(GLIBC_2.15) [SUSv4]			

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) [SUSv4]	posix_fallocate(GLIBC_2.2) [SUSv4]	posix_madvise(GLIBC_2.2) [SUSv4]	posix_memalign(GLIBC_2.2) [SUSv4]

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) [SUSv4]	bind(GLIBC_2.0) [SUSv4]	bindresvport(GLIBC_2.0) [LSB]
connect(GLIBC_2.0) [SUSv4]	gethostid(GLIBC_2.0) [SUSv4]	gethostname(GLIBC_2.0) [SUSv4]	getpeername(GLIBC_2.0) [SUSv4]
getsockname(GLIBC_2.0) [SUSv4]	getsockopt(GLIBC_2.0) [LSB]	if_freenameindex(GLIBC_2.1) [SUSv4]	if_indextoname(GLIBC_2.1) [SUSv4]
if_nameindex(GLIBC_2.1) [SUSv4]	if_nametoindex(GLIBC_2.1) [SUSv4]	listen(GLIBC_2.0) [SUSv4]	recv(GLIBC_2.0) [SUSv4]
recvfrom(GLIBC_2.0) [SUSv4]	recvmsg(GLIBC_2.0) [SUSv4]	send(GLIBC_2.0) [SUSv4]	sendmsg(GLIBC_2.0) [SUSv4]
sendto(GLIBC_2.0) [SUSv4]	setsockopt(GLIBC_2.0) [LSB]	shutdown(GLIBC_2.0) [SUSv4]	sockatmark(GLIBC_2.2.4) [SUSv4]
socket(GLIBC_2.0) [SUSv4]	socketpair(GLIBC_2.0) [SUSv4]		

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]		

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) [SUSv4]	fgetwc(GLIBC_2.2) [SUSv4]	fgetws(GLIBC_2.2) [SUSv4]
fputwc(GLIBC_2.2) [SUSv4]	fputws(GLIBC_2.2) [SUSv4]	fwide(GLIBC_2.2) [SUSv4]	fwprintf(GLIBC_2.2) [SUSv4]
fwscanf(GLIBC_2.2) [LSB]	getwc(GLIBC_2.2) [SUSv4]	getwchar(GLIBC_2.2) [SUSv4]	mblen(GLIBC_2.0) [SUSv4]
mbrlen(GLIBC_2.0) [SUSv4]	mbrtowc(GLIBC_2.0) [SUSv4]	mbsinit(GLIBC_2.0) [SUSv4]	mbsnrtowcs(GLIBC_2.0) [SUSv4]
mbsrtowcs(GLIBC_2.0) [SUSv4]	mbstowcs(GLIBC_2.0) [SUSv4]	mbtowc(GLIBC_2.0) [SUSv4]	putwc(GLIBC_2.2) [SUSv4]
putwchar(GLIBC_2.2) [SUSv4]	swprintf(GLIBC_2.2) [SUSv4]	swscanf(GLIBC_2.2) [LSB]	towctrans(GLIBC_2.0) [SUSv4]
towlower(GLIBC_2.0) [SUSv4]	towupper(GLIBC_2.0) [SUSv4]	ungetwc(GLIBC_2.2) [SUSv4]	vfwprintf(GLIBC_2.2) [SUSv4]
vfwscanf(GLIBC_2.2) [LSB]	vswprintf(GLIBC_2.2) [SUSv4]	vswscanf(GLIBC_2.2) [LSB]	vwprintf(GLIBC_2.2) [SUSv4]
vwscanf(GLIBC_2.2) [LSB]	wcpcpy(GLIBC_2.0) [SUSv4]	wcpncpy(GLIBC_2.0) [SUSv4]	wcrtomb(GLIBC_2.0) [SUSv4]
wcscasecmp(GLIBC_2.1) [SUSv4]	wcscat(GLIBC_2.0) [SUSv4]	wcschr(GLIBC_2.0) [SUSv4]	wcscmp(GLIBC_2.0) [SUSv4]
wcscoll(GLIBC_2.0) [SUSv4]	wcscpy(GLIBC_2.0) [SUSv4]	wcscspn(GLIBC_2.0) [SUSv4]	wcsdup(GLIBC_2.0) [SUSv4]
wcsftime(GLIBC_2.2) [SUSv4]	wcslen(GLIBC_2.0) [SUSv4]	wcsncasecmp(GLIBC_2.1) [SUSv4]	wcsncat(GLIBC_2.0) [SUSv4]
wcsncmp(GLIBC_2.0) [SUSv4]	wcsncpy(GLIBC_2.0) [SUSv4]	wcsnlen(GLIBC_2.1) [SUSv4]	wcsnrtombs(GLIBC_2.0) [SUSv4]
wcspbrk(GLIBC_2.0) [SUSv4]	wcsrchr(GLIBC_2.0) [SUSv4]	wcsrtombs(GLIBC_2.0) [SUSv4]	wcsspn(GLIBC_2.0) [SUSv4]
wcsstr(GLIBC_2.0) [SUSv4]	wcstod(GLIBC_2.0) [SUSv4]	wcstof(GLIBC_2.0) [SUSv4]	wcstoimax(GLIBC_2.1) [SUSv4]
wcstok(GLIBC_2.0) [SUSv4]	wcstol(GLIBC_2.0) [SUSv4]	wcstold(GLIBC_2.0) [SUSv4]	wcstoll(GLIBC_2.1) [SUSv4]
wcstombs(GLIBC_2.0) [SUSv4]	wcstoq(GLIBC_2.0) [LSB]	wcstoul(GLIBC_2.0) [SUSv4]	wcstoull(GLIBC_2.1) [SUSv4]
wcstoumax(GLIBC_2.1) [SUSv4]	wcstouq(GLIBC_2.0) [LSB]	wcswcs(GLIBC_2.1) [SUSv3]	wcswidth(GLIBC_2.0) [SUSv4]
wcsxfrm(GLIBC_2.0) [SUSv4]	wctob(GLIBC_2.0) [SUSv4]	wctomb(GLIBC_2.0) [SUSv4]	wctrans(GLIBC_2.0) [SUSv4]
wctype(GLIBC_2.0) [SUSv4]	wcwidth(GLIBC_2.0) [SUSv4]	wmemchr(GLIBC_2.0) [SUSv4]	wmemcmp(GLIBC_2.0) [SUSv4]

wmemcpy(GLIBC_2.0) [SUSv4]	wmemmove(GLIBC_2.0) [SUSv4]	wmemset(GLIBC_2.0) [SUSv4]	wprintf(GLIBC_2.2) [SUSv4]
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

__mempcpy(GLIBC_2.0) [LSB]	__rawmemchr(GLIBC_2.1) [LSB]	__stpcpy(GLIBC_2.0) [LSB]	__strdup(GLIBC_2.0) [LSB]
__strtod_internal(GLIBC_2.0) [LSB]	__strtof_internal(GLIBC_2.0) [LSB]	__strtok_r(GLIBC_2.0) [LSB]	__strtol_internal(GLIBC_2.0) [LSB]
__strtold_internal(GLIBC_2.0) [LSB]	__strtoll_internal(GLIBC_2.0) [LSB]	__strtoul_internal(GLIBC_2.0) [LSB]	__strtoull_internal(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) [SUSv4]	index(GLIBC_2.0) [SUSv3]	memccpy(GLIBC_2.0) [SUSv4]	memchr(GLIBC_2.0) [SUSv4]
memcmp(GLIBC_2.0) [SUSv4]	memcpy(GLIBC_2.0) [SUSv4]	memmove(GLIBC_2.0) [SUSv4]	memrchr(GLIBC_2.2) [LSB]
memset(GLIBC_2.0) [SUSv4]	rindex(GLIBC_2.0) [SUSv3]	stpcpy(GLIBC_2.0) [SUSv4]	stpncpy(GLIBC_2.0) [SUSv4]
strcasecmp(GLIBC_2.0) [SUSv4]	strcasestr(GLIBC_2.1) [LSB]	strcat(GLIBC_2.0) [SUSv4]	strchr(GLIBC_2.0) [SUSv4]
strcmp(GLIBC_2.0) [SUSv4]	strcoll(GLIBC_2.0) [SUSv4]	strcpy(GLIBC_2.0) [SUSv4]	strcspn(GLIBC_2.0) [SUSv4]
strdup(GLIBC_2.0) [SUSv4]	strerror(GLIBC_2.0) [SUSv4]	strerror_r(GLIBC_2.0) [LSB]	strfmon(GLIBC_2.0) [SUSv4]
strftime(GLIBC_2.0) [SUSv4]	strlen(GLIBC_2.0) [SUSv4]	strncasecmp(GLIBC_2.0) [SUSv4]	strncat(GLIBC_2.0) [SUSv4]
strncmp(GLIBC_2.0) [SUSv4]	strncpy(GLIBC_2.0) [SUSv4]	strndup(GLIBC_2.0) [SUSv4]	strnlen(GLIBC_2.0) [SUSv4]
strpbrk(GLIBC_2.0) [SUSv4]	strptime(GLIBC_2.0) [LSB]	strrchr(GLIBC_2.0) [SUSv4]	strsep(GLIBC_2.0) [LSB]
strsignal(GLIBC_2.0) [SUSv4]	strspn(GLIBC_2.0) [SUSv4]	strstr(GLIBC_2.0) [SUSv4]	strtof(GLIBC_2.0) [SUSv4]

strtoimax(GLIBC_2.1) [SUSv4]	strtok(GLIBC_2.0) [SUSv4]	strtok_r(GLIBC_2.0) [SUSv4]	strtold(GLIBC_2.0) [SUSv4]
strtoll(GLIBC_2.0) [SUSv4]	strtoq(GLIBC_2.0) [LSB]	strtoull(GLIBC_2.0) [SUSv4]	strtoumax(GLIBC_2.1) [SUSv4]
strtouq(GLIBC_2.0) [LSB]	strxfrm(GLIBC_2.0) [SUSv4]	swab(GLIBC_2.0) [SUSv4]	

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]			

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) [SUSv4]	msgctl(GLIBC_2.2) [SUSv4]	msgget(GLIBC_2.0) [SUSv4]	msgrcv(GLIBC_2.0) [SUSv4]
msgsnd(GLIBC_2.0) [SUSv4]	semctl(GLIBC_2.2) [SUSv4]	semget(GLIBC_2.0) [SUSv4]	semop(GLIBC_2.0) [SUSv4]
shmat(GLIBC_2.0) [SUSv4]	shmctl(GLIBC_2.2) [SUSv4]	shmdt(GLIBC_2.0) [SUSv4]	shmget(GLIBC_2.0) [SUSv4]

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) [SUSv4]	regerror(GLIBC_2.0) [SUSv4]	regexec(GLIBC_2.3.4) [LSB]	regfree(GLIBC_2.0) [SUSv4]

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) [SUSv4]	_toupper(GLIBC_2.0) [SUSv4]	isalnum(GLIBC_2.0) [SUSv4]
isalpha(GLIBC_2.0) [SUSv4]	isascii(GLIBC_2.0) [SUSv4]	iscntrl(GLIBC_2.0) [SUSv4]	isdigit(GLIBC_2.0) [SUSv4]
isgraph(GLIBC_2.0) [SUSv4]	islower(GLIBC_2.0) [SUSv4]	isprint(GLIBC_2.0) [SUSv4]	ispunct(GLIBC_2.0) [SUSv4]
isspace(GLIBC_2.0) [SUSv4]	isupper(GLIBC_2.0) [SUSv4]	iswalnum(GLIBC_2.0) [SUSv4]	iswalpha(GLIBC_2.0) [SUSv4]
iswblank(GLIBC_2.1) [SUSv4]	iswcntrl(GLIBC_2.0) [SUSv4]	iswctype(GLIBC_2.0) [SUSv4]	iswdigit(GLIBC_2.0) [SUSv4]
iswgraph(GLIBC_2.0) [SUSv4]	iswlower(GLIBC_2.0) [SUSv4]	iswprint(GLIBC_2.0) [SUSv4]	iswpunct(GLIBC_2.0) [SUSv4]
iswspace(GLIBC_2.0) [SUSv4]	iswupper(GLIBC_2.0) [SUSv4]	iswxdigit(GLIBC_2.0) [SUSv4]	isxdigit(GLIBC_2.0) [SUSv4]
toascii(GLIBC_2.0) [SUSv4]	tolower(GLIBC_2.0) [SUSv4]	toupper(GLIBC_2.0) [SUSv4]	

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) [SUSv4]	asctime_r(GLIBC_2.0) [SUSv4]	ctime(GLIBC_2.0) [SUSv4]
ctime_r(GLIBC_2.0) [SUSv4]	difftime(GLIBC_2.0) [SUSv4]	gmtime(GLIBC_2.0) [SUSv4]	gmtime_r(GLIBC_2.0) [SUSv4]
localtime(GLIBC_2.0) [SUSv4]	localtime_r(GLIBC_2.0) [SUSv4]	mktime(GLIBC_2.0) [SUSv4]	tzset(GLIBC_2.0) [SUSv4]
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) [SUSv4]
timezone(GLIBC_2.0) [SUSv4]	tzname(GLIBC_2.0) [SUSv4]		

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) [SUSv4]	cfgetospeed(GLIBC_2.0) [SUSv4]	cfmakeraw(GLIBC_2.0) [LSB]	cfsetispeed(GLIBC_2.0) [SUSv4]
cfsetospeed(GLIBC_2.0) [SUSv4]	cfsetspeed(GLIBC_2.0) [LSB]	tcdrain(GLIBC_2.0) [SUSv4]	tcflow(GLIBC_2.0) [SUSv4]
tcflush(GLIBC_2.0) [SUSv4]	tcgetattr(GLIBC_2.0) [SUSv4]	tcgetpgrp(GLIBC_2.0) [SUSv4]	tcgetsid(GLIBC_2.1) [SUSv4]
tcsendbreak(GLIBC_2.0) [SUSv4]	tcsetattr(GLIBC_2.0) [SUSv4]	tcsetpgrp(GLIBC_2.0) [SUSv4]	

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) [SUSv4]	endprotoent(GLIBC_2.0) [SUSv4]	endpwent(GLIBC_2.0) [SUSv4]	endservent(GLIBC_2.0) [SUSv4]
endutent(GLIBC_2.0) [LSB]	endutxent(GLIBC_2.1) [SUSv4]	getgrent(GLIBC_2.0) [SUSv4]	getgrent_r(GLIBC_2.1.2) [LSB]
getgrgid(GLIBC_2.0) [SUSv4]	getgrgid_r(GLIBC_2.1.2) [SUSv4]	getgrnam(GLIBC_2.0) [SUSv4]	getgrnam_r(GLIBC_2.1.2) [SUSv4]
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) [SUSv4]

getprotobyname_r(GLIBC_2.1.2) [LSB]	getprotobynumber(GLIBC_2.0) [SUSv4]	getprotobynumber_r(GLIBC_2.1.2) [LSB]	getprotoent(GLIBC_2.0) [SUSv4]
getprotoent_r(GLIBC_2.1.2) [LSB]	getpwent(GLIBC_2.0) [SUSv4]	getpwent_r(GLIBC_2.1.2) [LSB]	getpwnam(GLIBC_2.0) [SUSv4]
getpwnam_r(GLIBC_2.1.2) [SUSv4]	getpwuid(GLIBC_2.0) [SUSv4]	getpwuid_r(GLIBC_2.1.2) [SUSv4]	getservbyname(GLIBC_2.0) [SUSv4]
getservbyname_r(GLIBC_2.1.2) [LSB]	getservbyport(GLIBC_2.0) [SUSv4]	getservbyport_r(GLIBC_2.1.2) [LSB]	getservent(GLIBC_2.0) [SUSv4]
getservent_r(GLIBC_2.1.2) [LSB]	getutent(GLIBC_2.0) [LSB]	getutent_r(GLIBC_2.0) [LSB]	getutxent(GLIBC_2.1) [SUSv4]
getutxid(GLIBC_2.1) [SUSv4]	getutxline(GLIBC_2.1) [SUSv4]	pututxline(GLIBC_2.1) [SUSv4]	setgrent(GLIBC_2.0) [SUSv4]
setgroups(GLIBC_2.0) [LSB]	setprotoent(GLIBC_2.0) [SUSv4]	setpwent(GLIBC_2.0) [SUSv4]	setservent(GLIBC_2.0) [SUSv4]
setutent(GLIBC_2.0) [LSB]	setutxent(GLIBC_2.1) [SUSv4]	utmpname(GLIBC_2.0) [LSB]	

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(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]		

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_main(GLIBC_2.0) [LSB]			

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(GLIBC_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(GLIBC_2.1) [LFS]	ftw64(GLIBC_2.1) [LFS]	getrlimit64(GLIBC_2.2) [LFS]	lockf64(GLIBC_2.1) [LFS]
lseek64(GLIBC_2.1) [LFS]	mkstemp64(GLIBC_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]		

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_2.1.1) [SUSv4]	__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]
__isnanl(GLIBC_2.0) [LSB]	__sysconf(GLIBC_2.2) [LSB]	__xpg_basename(GLIBC_2.0) [LSB]	_exit(GLIBC_2.0) [SUSv4]
_longjmp(GLIBC_2.0) [SUSv4]	_setjmp(GLIBC_2.0) [SUSv4]	a64l(GLIBC_2.0) [SUSv4]	abort(GLIBC_2.0) [SUSv4]
abs(GLIBC_2.0) [SUSv4]	alphasort(GLIBC_2.0) [SUSv4]	alphasort64(GLIBC_2.2) [LSB]	argz_add(GLIBC_2.0) [LSB]
argz_add_sep(GLIBC_2.0) [LSB]	argz_append(GLIBC_2.0) [LSB]	argz_count(GLIBC_2.0) [LSB]	argz_create(GLIBC_2.0) [LSB]
argz_create_sep(GLIBC_2.0) [LSB]	argz_delete(GLIBC_2.0) [LSB]	argz_extract(GLIBC_2.0) [LSB]	argz_insert(GLIBC_2.0) [LSB]
argz_next(GLIBC_2.0) [LSB]	argz_replace(GLIBC_2.0) [LSB]	argz_stringify(GLIBC_2.0) [LSB]	atof(GLIBC_2.0) [SUSv4]
atoi(GLIBC_2.0) [SUSv4]	atol(GLIBC_2.0) [SUSv4]	atoll(GLIBC_2.0) [SUSv4]	basename(GLIBC_2.0) [LSB]
bsearch(GLIBC_2.0) [SUSv4]	calloc(GLIBC_2.0) [SUSv4]	closelog(GLIBC_2.0) [SUSv4]	confstr(GLIBC_2.0) [SUSv4]
cuserid(GLIBC_2.0) [SUSv2]	daemon(GLIBC_2.0) [LSB]	dirfd(GLIBC_2.0) [SUSv4]	dirname(GLIBC_2.0) [SUSv4]
div(GLIBC_2.0) [SUSv4]	dl_iterate_phdr(GLIBC_2.2.4) [LSB]	drand48(GLIBC_2.0) [SUSv4]	drand48_r(GLIBC_2.0) [LSB]
ecvt(GLIBC_2.0) [SUSv3]	envz_add(GLIBC_2.0) [LSB]	envz_entry(GLIBC_2.0) [LSB]	envz_get(GLIBC_2.0) [LSB]
envz_merge(GLIBC_2.0) [LSB]	envz_remove(GLIBC_2.0) [LSB]	envz_strip(GLIBC_2.0) [LSB]	erand48(GLIBC_2.0) [SUSv4]
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) [SUSv4]	fnmatch(GLIBC_2.2.3) [LSB]

fpathconf(GLIBC_2.0) [SUSv4]	free(GLIBC_2.0) [SUSv4]	freeaddrinfo(GLIBC_2.0) [SUSv4]	ftrylockfile(GLIBC_2.0) [SUSv4]
ftw(GLIBC_2.0) [SUSv4]	funlockfile(GLIBC_2.0) [SUSv4]	gai_strerror(GLIBC_2.1) [SUSv4]	gcvt(GLIBC_2.0) [SUSv3]
getaddrinfo(GLIBC_2.0) [SUSv4]	getcwd(GLIBC_2.0) [LSB]	getdate(GLIBC_2.1) [SUSv4]	getdomainname(GLIBC_2.0) [LSB]
getenv(GLIBC_2.0) [SUSv4]	getlogin(GLIBC_2.0) [SUSv4]	getlogin_r(GLIBC_2.0) [SUSv4]	getnameinfo(GLIBC_2.1) [SUSv4]
getopt(GLIBC_2.0) [LSB]	getopt_long(GLIBC_2.0) [LSB]	getopt_long_only(GLIBC_2.0) [LSB]	getsubopt(GLIBC_2.0) [SUSv4]
gettimeofday(GLIBC_2.0) [SUSv4]	glob(GLIBC_2.0) [SUSv4]	glob64(GLIBC_2.2) [LSB]	globfree(GLIBC_2.0) [SUSv4]
globfree64(GLIBC_2.1) [LSB]	grantpt(GLIBC_2.1) [SUSv4]	hcreate(GLIBC_2.0) [SUSv4]	hcreate_r(GLIBC_2.0) [LSB]
hdestroy(GLIBC_2.0) [SUSv4]	hdestroy_r(GLIBC_2.0) [LSB]	hsearch(GLIBC_2.0) [SUSv4]	hsearch_r(GLIBC_2.0) [LSB]
htonl(GLIBC_2.0) [SUSv4]	htons(GLIBC_2.0) [SUSv4]	imaxabs(GLIBC_2.1.1) [SUSv4]	imaxdiv(GLIBC_2.1.1) [SUSv4]
inet_addr(GLIBC_2.0) [SUSv4]	inet_aton(GLIBC_2.0) [LSB]	inet_ntoa(GLIBC_2.0) [SUSv4]	inet_ntop(GLIBC_2.0) [SUSv4]
inet_pton(GLIBC_2.0) [SUSv4]	initstate(GLIBC_2.0) [SUSv4]	initstate_r(GLIBC_2.0) [LSB]	insque(GLIBC_2.0) [SUSv4]
isatty(GLIBC_2.0) [SUSv4]	isblank(GLIBC_2.0) [SUSv4]	jrand48(GLIBC_2.0) [SUSv4]	jrand48_r(GLIBC_2.0) [LSB]
l64a(GLIBC_2.0) [SUSv4]	labs(GLIBC_2.0) [SUSv4]	lcong48(GLIBC_2.0) [SUSv4]	lcong48_r(GLIBC_2.0) [LSB]
ldiv(GLIBC_2.0) [SUSv4]	lfind(GLIBC_2.0) [SUSv4]	llabs(GLIBC_2.0) [SUSv4]	lldiv(GLIBC_2.0) [SUSv4]
longjmp(GLIBC_2.0) [SUSv4]	lrand48(GLIBC_2.0) [SUSv4]	lrand48_r(GLIBC_2.0) [LSB]	lsearch(GLIBC_2.0) [SUSv4]
makecontext(GLIBC_2.1) [SUSv3]	malloc(GLIBC_2.0) [SUSv4]	memmem(GLIBC_2.0) [LSB]	mkdtemp(GLIBC_2.2) [SUSv4]
mkstemp(GLIBC_2.0) [SUSv4]	mktemp(GLIBC_2.0) [SUSv3]	mrand48(GLIBC_2.0) [SUSv4]	mrand48_r(GLIBC_2.0) [LSB]
nftw(GLIBC_2.3.3) [SUSv4]	nrand48(GLIBC_2.0) [SUSv4]	nrand48_r(GLIBC_2.0) [LSB]	ntohl(GLIBC_2.0) [SUSv4]
ntohs(GLIBC_2.0) [SUSv4]	open_memstream(GLIBC_2.0) [SUSv4]	openlog(GLIBC_2.0) [SUSv4]	perror(GLIBC_2.0) [SUSv4]
posix_openpt(GLIBC_2.2.1) [SUSv4]	ptsname(GLIBC_2.1) [SUSv4]	putenv(GLIBC_2.0) [SUSv4]	qsort(GLIBC_2.0) [SUSv4]

rand(GLIBC_2.0) [SUSv4]	rand_r(GLIBC_2.0) [SUSv4]	random(GLIBC_2.0) [SUSv4]	random_r(GLIBC_2.0) [LSB]
realloc(GLIBC_2.0) [SUSv4]	realpath(GLIBC_2.3) [SUSv4]	remque(GLIBC_2.0) [SUSv4]	scandir(GLIBC_2.0) [SUSv4]
scandir64(GLIBC_2.2) [LSB]	seed48(GLIBC_2.0) [SUSv4]	seed48_r(GLIBC_2.0) [LSB]	sendfile(GLIBC_2.1) [LSB]
setenv(GLIBC_2.0) [SUSv4]	sethostname(GLIBC_2.0) [LSB]	setlogmask(GLIBC_2.0) [SUSv4]	setstate(GLIBC_2.0) [SUSv4]
setstate_r(GLIBC_2.0) [LSB]	srand(GLIBC_2.0) [SUSv4]	srand48(GLIBC_2.0) [SUSv4]	srand48_r(GLIBC_2.0) [LSB]
srandom(GLIBC_2.0) [SUSv4]	srandom_r(GLIBC_2.0) [LSB]	strtod(GLIBC_2.0) [SUSv4]	strtol(GLIBC_2.0) [SUSv4]
strtoul(GLIBC_2.0) [SUSv4]	swapcontext(GLIBC_2.1) [SUSv3]	syslog(GLIBC_2.0) [SUSv4]	system(GLIBC_2.0) [LSB]
tdelete(GLIBC_2.0) [SUSv4]	tfind(GLIBC_2.0) [SUSv4]	tmpfile(GLIBC_2.1) [SUSv4]	tmpnam(GLIBC_2.0) [SUSv4]
tsearch(GLIBC_2.0) [SUSv4]	ttyname(GLIBC_2.0) [SUSv4]	ttyname_r(GLIBC_2.0) [SUSv4]	twalk(GLIBC_2.0) [SUSv4]
unlockpt(GLIBC_2.1) [SUSv4]	unsetenv(GLIBC_2.0) [SUSv4]	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) [SUSv4]	wordfree(GLIBC_2.1) [SUSv4]

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) [SUSv4]

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_2.12) [LSB]	environ(GLIBC_2.0) [SUSv4]
getdate_err(GLIBC_2.1) [SUSv4]	optarg(GLIBC_2.0) [SUSv4]	opterr(GLIBC_2.0) [SUSv4]	optind(GLIBC_2.0) [SUSv4]

optopt(GLIBC_2.0) [SUSv4]			

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 argz.h

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

10.3.2 assert.h

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

10.3.3 cpio.h

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

10.3.4 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
};
```

10.3.5 dirent.h

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

10.3.6 elf.h

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

10.3.7 endian.h

```
#define __BYTE_ORDER __LITTLE_ENDIAN
```

10.3.8 errno.h

```
#define EDEADLOCK      EDEADLK
```

10.3.9 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
```

10.3.10 fmtmsg.h

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



```
 */
```

10.3.11 fnmatch.h

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

10.3.12 ftw.h

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

10.3.13 getopt.h

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

10.3.14 glob.h

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

10.3.15 iconv.h

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

10.3.16 ifaddrs.h

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

10.3.17 inttypes.h

```
#define __PRIPTR_PREFIX
#define __PRI64_PREFIX  "ll"

typedef lldiv_t imaxdiv_t;
```

10.3.18 langinfo.h

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

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

10.3.19 limits.h

```
#define LONG_MAX        0x7FFFFFFFL
#define ULONG_MAX       0xFFFFFFFFUL
#define LONG_BIT        32

#define CHAR_MAX        SCHAR_MAX
#define CHAR_MIN        SCHAR_MIN

#define PTHREAD_STACK_MIN      16384
```

10.3.20 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;
};
```

10.3.21 locale.h

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

10.3.22 lsb/time.h

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

10.3.23 lsb/types.h

```
typedef int32_t ssize_t;
```

10.3.24 lsb/wchar.h

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

10.3.25 net/if.h

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



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

10.3.26 netdb.h

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

10.3.27 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
```

10.3.28 netinet/igmp.h

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

10.3.29 netinet/in.h

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

10.3.30 netinet/in_systm.h

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

10.3.31 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];
};
```

10.3.32 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
```

10.3.33 netinet/ip_icmp.h

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

10.3.34 netinet/tcp.h

```
struct tcphdr {
    uint16_t source;
    uint16_t dest;
    uint32_t seq;
    uint32_t ack_seq;
    uint16_t res1:4;
    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;
};
```


10.3.35 netinet/udp.h

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

10.3.36 nl_types.h

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

10.3.37 pwd.h

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

10.3.38 regex.h

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

10.3.39 rpc/auth.h

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

10.3.40 rpc/clnt.h

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

10.3.41 rpc/rpc_msg.h

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

10.3.42 rpc/svc.h

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

10.3.43 rpc/types.h

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

10.3.44 rpc/xdr.h

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

10.3.45 sched.h

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

10.3.46 search.h

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

10.3.47 setjmp.h

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

10.3.48 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 padding1[44];
    __extension__ union {
        unsigned long int padding2[12];
        struct _fpx_sw_bytes sw_reserved;
    };
};

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;
};
```

10.3.49 spawn.h

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

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

10.3.50 stddef.h

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

10.3.51 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;
```

10.3.52 stdio.h

```
#define __IO_FILE_SIZE  148
```

10.3.53 stdlib.h

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

10.3.54 string.h


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

10.3.55 sys/epoll.h

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

10.3.56 sys/file.h

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

10.3.57 sys/inotify.h

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

10.3.58 sys/io.h

```
extern int ioperm(unsigned long int from, unsigned long int num,
                  int turn_on);
extern int iopl(int level);
```

10.3.59 sys/ioctl.h

```
#define TIOCGWINSZ      0x5413
#define TIOCSWINSZ      0x5414
#define FIONREAD        0x541B
#define TIOCNOTTY       0x5422
```

10.3.60 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;
};
```

10.3.61 sys/mman.h

```
#define MCL_CURRENT     1
#define MCL_FUTURE      2
```

10.3.62 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;
};
```

10.3.63 sys/param.h

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

10.3.64 sys/poll.h

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

10.3.65 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
};
```

10.3.66 sys/resource.h

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

10.3.67 sys/select.h

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

10.3.68 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;
};
```

10.3.69 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;
};
```

10.3.70 sys/socket.h

```
typedef uint32_t __ss_aligntype;

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

10.3.71 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;
};
```

10.3.72 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 */
};
```

10.3.73 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];
};
```

10.3.74 sys/sysinfo.h

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

10.3.75 sys/time.h

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

10.3.76 sys/timeb.h

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

10.3.77 sys/times.h

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

10.3.78 sys/un.h

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

10.3.79 sys/utsname.h

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

10.3.80 sys/wait.h

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

10.3.81 sysexits.h

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


10.3.82 syslog.h

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

10.3.83 tar.h

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

10.3.84 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
```

10.3.85 time.h

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

10.3.86 ucontext.h

```
enum {
    REG_GS = 0,
    REG_FS = 1,
    REG_ES = 2,
    REG_DS = 3,
    REG_EDI = 4,
    REG_ESI = 5,
    REG_EBP = 6,
    REG_ESP = 7,
    REG_EBX = 8,
    REG_EDX = 9,
    REG_ECX = 10,
    REG_EAX = 11,
    REG_TRAPNO = 12,
    REG_ERR = 13,
    REG_EIP = 14,
    REG_CS = 15,
    REG_EFL = 16,
    REG_UESP = 17,
    REG_SS = 18
};

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;
```

10.3.87 ulimit.h

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

10.3.88 unistd.h

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

10.3.89 utime.h

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

10.3.90 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. */
};
```

10.3.91 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. */
};
```

10.3.92 wordexp.h

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

10.4 Interface Definitions for libc

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

Other interfaces listed in Section 10.2 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.

ioperm

Name

`ioperm` — set port input/output permissions

Synopsis

```
#include <sys/io.h> /* for glibc */
```



```
int ioperm(unsigned long from, unsigned long num, int turn_on);
```

Description

ioperm sets the port access permission bits for the process for num bytes starting from port address from to the value turn_on. The use of ioperm requires root privileges.

Only the first 0x3ff I/O ports can be specified in this manner. For more ports, the iopl function must be used. Permissions are not inherited on fork, but on exec they are. This is useful for giving port access permissions to non-privileged tasks.

Return Value

On success, zero is returned. On error, -1 is returned, and errno is set appropriately.

Notes

Libc5 treats it as a system call and has a prototype in <unistd.h>. Glibc1 does not have a prototype. Glibc2 has a prototype both in <sys/io.h> and in <sys/perm.h>. Avoid the latter, it is available on i386 only.

iopl

Name

`iopl` — change I/O privilege level

Synopsis

```
#include <sys/io.h> /* for glibc */
```

```
int iopl(int level);
```

Description

iopl changes the I/O privilege level of the current process, as specified in level.

This call is necessary to allow 8514-compatible X servers to run under Linux. Since these X servers require access to all 65536 I/O ports, the ioperm call is not sufficient.

In addition to granting unrestricted I/O port access, running at a higher I/O privilege level also allows the process to disable interrupts. This will probably crash the system, and is not recommended.

Permissions are inherited by fork and exec.

The I/O privilege level for a normal process is 0.

Return Value

On success, zero is returned. On error, -1 is returned, and errno is set appropriately.

Errors

EINVAL

level is greater than 3.

EPERM

The current user is not the super-user.

10.5 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] LSB Core - Generic
[SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)
[SUSv4] POSIX 1003.1-2008 (ISO/IEC 9945-2009)

10.5.1 Math

10.5.1.1 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) [SUSv4]	acosf(GLIBC_2.0) [SUSv4]	acosh(GLIBC_2.0) [SUSv4]
acoshf(GLIBC_2.0) [SUSv4]	acoshl(GLIBC_2.0) [SUSv4]	acosl(GLIBC_2.0) [SUSv4]	asin(GLIBC_2.0) [SUSv4]
asinf(GLIBC_2.0) [SUSv4]	asinh(GLIBC_2.0) [SUSv4]	asinhf(GLIBC_2.0) [SUSv4]	asinhl(GLIBC_2.0) [SUSv4]
asinl(GLIBC_2.0) [SUSv4]	atan(GLIBC_2.0) [SUSv4]	atan2(GLIBC_2.0) [SUSv4]	atan2f(GLIBC_2.0) [SUSv4]
atan2l(GLIBC_2.0) [SUSv4]	atanf(GLIBC_2.0) [SUSv4]	atanh(GLIBC_2.0) [SUSv4]	atanhf(GLIBC_2.0) [SUSv4]
atanhl(GLIBC_2.0) [SUSv4]	atanl(GLIBC_2.0) [SUSv4]	cabs(GLIBC_2.1) [SUSv4]	cabsf(GLIBC_2.1) [SUSv4]
cabsl(GLIBC_2.1) [SUSv4]	cacos(GLIBC_2.1) [SUSv4]	cacosf(GLIBC_2.1) [SUSv4]	cacosh(GLIBC_2.1) [SUSv4]
cacoshf(GLIBC_2.1) [SUSv4]	cacoshl(GLIBC_2.1) [SUSv4]	cacosl(GLIBC_2.1) [SUSv4]	carg(GLIBC_2.1) [SUSv4]
cargf(GLIBC_2.1) [SUSv4]	cargl(GLIBC_2.1) [SUSv4]	casin(GLIBC_2.1) [SUSv4]	casinf(GLIBC_2.1) [SUSv4]
casinh(GLIBC_2.1) [SUSv4]	casinhf(GLIBC_2.1) [SUSv4]	casinhl(GLIBC_2.1) [SUSv4]	casinl(GLIBC_2.1) [SUSv4]
catan(GLIBC_2.1) [SUSv4]	catanf(GLIBC_2.1) [SUSv4]	catanh(GLIBC_2.1) [SUSv4]	catanhf(GLIBC_2.1) [SUSv4]
catanhl(GLIBC_2.1) [SUSv4]	catanl(GLIBC_2.1) [SUSv4]	cbrt(GLIBC_2.0) [SUSv4]	cbrtf(GLIBC_2.0) [SUSv4]
cbrtl(GLIBC_2.0) [SUSv4]	ccos(GLIBC_2.1) [SUSv4]	ccosf(GLIBC_2.1) [SUSv4]	ccosh(GLIBC_2.1) [SUSv4]
ccoshf(GLIBC_2.1) [SUSv4]	ccoshl(GLIBC_2.1) [SUSv4]	ccosl(GLIBC_2.1) [SUSv4]	ceil(GLIBC_2.0) [SUSv4]
ceilf(GLIBC_2.0) [SUSv4]	ceill(GLIBC_2.0) [SUSv4]	cexp(GLIBC_2.1) [SUSv4]	cexpf(GLIBC_2.1) [SUSv4]
cexpl(GLIBC_2.1) [SUSv4]	cimag(GLIBC_2.1) [SUSv4]	cimagf(GLIBC_2.1) [SUSv4]	cimagl(GLIBC_2.1) [SUSv4]
clog(GLIBC_2.1) [SUSv4]	clog10(GLIBC_2.1) [LSB]	clog10f(GLIBC_2.1) [LSB]	clog10l(GLIBC_2.1) [LSB]
clogf(GLIBC_2.1) [SUSv4]	clogl(GLIBC_2.1) [SUSv4]	conj(GLIBC_2.1) [SUSv4]	conjf(GLIBC_2.1) [SUSv4]
conjl(GLIBC_2.1) [SUSv4]	copysign(GLIBC_2.0) [SUSv4]	copysignf(GLIBC_2.0) [SUSv4]	copysignl(GLIBC_2.0) [SUSv4]
cos(GLIBC_2.0) [SUSv4]	cosf(GLIBC_2.0) [SUSv4]	cosh(GLIBC_2.0) [SUSv4]	coshf(GLIBC_2.0) [SUSv4]

coshl(GLIBC_2.0) [SUSv4]	cosl(GLIBC_2.0) [SUSv4]	cpow(GLIBC_2.1) [SUSv4]	cpowf(GLIBC_2.1) [SUSv4]
cpowl(GLIBC_2.1) [SUSv4]	cproj(GLIBC_2.1) [SUSv4]	cprojf(GLIBC_2.1) [SUSv4]	cprojl(GLIBC_2.1) [SUSv4]
creal(GLIBC_2.1) [SUSv4]	crealf(GLIBC_2.1) [SUSv4]	creall(GLIBC_2.1) [SUSv4]	csin(GLIBC_2.1) [SUSv4]
csinf(GLIBC_2.1) [SUSv4]	csinh(GLIBC_2.1) [SUSv4]	csinhf(GLIBC_2.1) [SUSv4]	csinhl(GLIBC_2.1) [SUSv4]
csinl(GLIBC_2.1) [SUSv4]	csqrt(GLIBC_2.1) [SUSv4]	csqrtf(GLIBC_2.1) [SUSv4]	csqrtl(GLIBC_2.1) [SUSv4]
ctan(GLIBC_2.1) [SUSv4]	ctanf(GLIBC_2.1) [SUSv4]	ctanh(GLIBC_2.1) [SUSv4]	ctanhf(GLIBC_2.1) [SUSv4]
ctanhl(GLIBC_2.1) [SUSv4]	ctanl(GLIBC_2.1) [SUSv4]	drem(GLIBC_2.0) [LSB]	dremf(GLIBC_2.0) [LSB]
dreml(GLIBC_2.0) [LSB]	erf(GLIBC_2.0) [SUSv4]	erfc(GLIBC_2.0) [SUSv4]	erfcf(GLIBC_2.0) [SUSv4]
erfcl(GLIBC_2.0) [SUSv4]	erff(GLIBC_2.0) [SUSv4]	erfl(GLIBC_2.0) [SUSv4]	exp(GLIBC_2.0) [SUSv4]
exp10(GLIBC_2.1) [LSB]	exp10f(GLIBC_2.1) [LSB]	exp10l(GLIBC_2.1) [LSB]	exp2(GLIBC_2.1) [SUSv4]
exp2f(GLIBC_2.1) [SUSv4]	exp2l(GLIBC_2.1) [SUSv4]	expf(GLIBC_2.0) [SUSv4]	expl(GLIBC_2.0) [SUSv4]
expm1(GLIBC_2.0) [SUSv4]	expm1f(GLIBC_2.0) [SUSv4]	expm1l(GLIBC_2.0) [SUSv4]	fabs(GLIBC_2.0) [SUSv4]
fabsf(GLIBC_2.0) [SUSv4]	fabsl(GLIBC_2.0) [SUSv4]	fdim(GLIBC_2.1) [SUSv4]	fdimf(GLIBC_2.1) [SUSv4]
fdiml(GLIBC_2.1) [SUSv4]	feclearexcept(GLIBC_2.2) [SUSv4]	fedisableexcept(GLIBC_2.2) [LSB]	feenableexcept(GLIBC_2.2) [LSB]
fegetenv(GLIBC_2.2) [SUSv4]	fegetexcept(GLIBC_2.2) [LSB]	fegetexceptflag(GLIBC_2.2) [SUSv4]	fegetround(GLIBC_2.1) [SUSv4]
feholdexcept(GLIBC_2.1) [SUSv4]	feraiseexcept(GLIBC_2.2) [SUSv4]	fesetenv(GLIBC_2.2) [SUSv4]	fesetexceptflag(GLIBC_2.2) [SUSv4]
fesetround(GLIBC_2.1) [SUSv4]	fetestexcept(GLIBC_2.1) [SUSv4]	feupdateenv(GLIBC_2.2) [SUSv4]	finite(GLIBC_2.0) [LSB]
finitef(GLIBC_2.0) [LSB]	finitel(GLIBC_2.0) [LSB]	floor(GLIBC_2.0) [SUSv4]	floorf(GLIBC_2.0) [SUSv4]
floorl(GLIBC_2.0) [SUSv4]	fma(GLIBC_2.1) [SUSv4]	fmaf(GLIBC_2.1) [SUSv4]	fmal(GLIBC_2.1) [SUSv4]
fmax(GLIBC_2.1) [SUSv4]	fmaxf(GLIBC_2.1) [SUSv4]	fmaxl(GLIBC_2.1) [SUSv4]	fmin(GLIBC_2.1) [SUSv4]

fminf(GLIBC_2.1) [SUSv4]	fminl(GLIBC_2.1) [SUSv4]	fmod(GLIBC_2.0) [SUSv4]	fmodf(GLIBC_2.0) [SUSv4]
fmodl(GLIBC_2.0) [SUSv4]	frexp(GLIBC_2.0) [SUSv4]	frexpf(GLIBC_2.0) [SUSv4]	frexpl(GLIBC_2.0) [SUSv4]
gamma(GLIBC_2.0) [LSB]	gammaf(GLIBC_2.0) [LSB]	gammal(GLIBC_2.0) [LSB]	hypot(GLIBC_2.0) [SUSv4]
hypotf(GLIBC_2.0) [SUSv4]	hypotl(GLIBC_2.0) [SUSv4]	ilogb(GLIBC_2.0) [SUSv4]	ilogbf(GLIBC_2.0) [SUSv4]
ilogbl(GLIBC_2.0) [SUSv4]	j0(GLIBC_2.0) [SUSv4]	j0f(GLIBC_2.0) [LSB]	j0l(GLIBC_2.0) [LSB]
j1(GLIBC_2.0) [SUSv4]	j1f(GLIBC_2.0) [LSB]	j1l(GLIBC_2.0) [LSB]	jn(GLIBC_2.0) [SUSv4]
jnf(GLIBC_2.0) [LSB]	jnl(GLIBC_2.0) [LSB]	ldexp(GLIBC_2.0) [SUSv4]	ldexpf(GLIBC_2.0) [SUSv4]
ldexpl(GLIBC_2.0) [SUSv4]	lgamma(GLIBC_2.0) [SUSv4]	lgamma_r(GLIBC_2.0) [LSB]	lgammaf(GLIBC_2.0) [SUSv4]
lgammaf_r(GLIBC_2.0) [LSB]	lgammal(GLIBC_2.0) [SUSv4]	lgammal_r(GLIBC_2.0) [LSB]	llrint(GLIBC_2.1) [SUSv4]
llrintf(GLIBC_2.1) [SUSv4]	llrintl(GLIBC_2.1) [SUSv4]	llround(GLIBC_2.1) [SUSv4]	llroundf(GLIBC_2.1) [SUSv4]
llroundl(GLIBC_2.1) [SUSv4]	log(GLIBC_2.0) [SUSv4]	log10(GLIBC_2.0) [SUSv4]	log10f(GLIBC_2.0) [SUSv4]
log10l(GLIBC_2.0) [SUSv4]	log1p(GLIBC_2.0) [SUSv4]	log1pf(GLIBC_2.0) [SUSv4]	log1pl(GLIBC_2.0) [SUSv4]
log2(GLIBC_2.1) [SUSv4]	log2f(GLIBC_2.1) [SUSv4]	log2l(GLIBC_2.1) [SUSv4]	logb(GLIBC_2.0) [SUSv4]
logbf(GLIBC_2.0) [SUSv4]	logbl(GLIBC_2.0) [SUSv4]	logf(GLIBC_2.0) [SUSv4]	logl(GLIBC_2.0) [SUSv4]
lrint(GLIBC_2.1) [SUSv4]	lrintf(GLIBC_2.1) [SUSv4]	lrintl(GLIBC_2.1) [SUSv4]	lround(GLIBC_2.1) [SUSv4]
lroundf(GLIBC_2.1) [SUSv4]	lroundl(GLIBC_2.1) [SUSv4]	matherr(GLIBC_2.0) [LSB]	modf(GLIBC_2.0) [SUSv4]
modff(GLIBC_2.0) [SUSv4]	modfl(GLIBC_2.0) [SUSv4]	nan(GLIBC_2.1) [SUSv4]	nanf(GLIBC_2.1) [SUSv4]
nanl(GLIBC_2.1) [SUSv4]	nearbyint(GLIBC_2.1) [SUSv4]	nearbyintf(GLIBC_2.1) [SUSv4]	nearbyintl(GLIBC_2.1) [SUSv4]
nextafter(GLIBC_2.0) [SUSv4]	nextafterf(GLIBC_2.0) [SUSv4]	nextafterl(GLIBC_2.0) [SUSv4]	nexttoward(GLIBC_2.1) [SUSv4]
nexttowardf(GLIBC_2.1) [SUSv4]	nexttowardl(GLIBC_2.1) [SUSv4]	pow(GLIBC_2.0) [SUSv4]	pow10(GLIBC_2.1) [LSB]
pow10f(GLIBC_2.1) [LSB]	pow10l(GLIBC_2.1) [LSB]	powf(GLIBC_2.0) [SUSv4]	powl(GLIBC_2.0) [SUSv4]

remainder(GLIBC_2.0) [SUSv4]	remainderf(GLIBC_2.0) [SUSv4]	remainderl(GLIBC_2.0) [SUSv4]	remquo(GLIBC_2.1) [SUSv4]
remquof(GLIBC_2.1) [SUSv4]	remquol(GLIBC_2.1) [SUSv4]	rint(GLIBC_2.0) [SUSv4]	rintf(GLIBC_2.0) [SUSv4]
rintl(GLIBC_2.0) [SUSv4]	round(GLIBC_2.1) [SUSv4]	roundf(GLIBC_2.1) [SUSv4]	roundl(GLIBC_2.1) [SUSv4]
scalb(GLIBC_2.0) [SUSv3]	scalbf(GLIBC_2.0) [LSB]	scalbl(GLIBC_2.0) [LSB]	scalbln(GLIBC_2.1) [SUSv4]
scalblnf(GLIBC_2.1) [SUSv4]	scalblnl(GLIBC_2.1) [SUSv4]	scalbn(GLIBC_2.0) [SUSv4]	scalbnf(GLIBC_2.0) [SUSv4]
scalbnl(GLIBC_2.0) [SUSv4]	significand(GLIBC_2.0) [LSB]	significandf(GLIBC_2.0) [LSB]	significandl(GLIBC_2.0) [LSB]
sin(GLIBC_2.0) [SUSv4]	sincos(GLIBC_2.1) [LSB]	sincosf(GLIBC_2.1) [LSB]	sincosl(GLIBC_2.1) [LSB]
sinf(GLIBC_2.0) [SUSv4]	sinh(GLIBC_2.0) [SUSv4]	sinhf(GLIBC_2.0) [SUSv4]	sinhl(GLIBC_2.0) [SUSv4]
sinl(GLIBC_2.0) [SUSv4]	sqrt(GLIBC_2.0) [SUSv4]	sqrtf(GLIBC_2.0) [SUSv4]	sqrtl(GLIBC_2.0) [SUSv4]
tan(GLIBC_2.0) [SUSv4]	tanf(GLIBC_2.0) [SUSv4]	tanh(GLIBC_2.0) [SUSv4]	tanhf(GLIBC_2.0) [SUSv4]
tanhl(GLIBC_2.0) [SUSv4]	tanl(GLIBC_2.0) [SUSv4]	tgamma(GLIBC_2.1) [SUSv4]	tgammaf(GLIBC_2.1) [SUSv4]
tgammal(GLIBC_2.1) [SUSv4]	trunc(GLIBC_2.1) [SUSv4]	truncf(GLIBC_2.1) [SUSv4]	truncl(GLIBC_2.1) [SUSv4]
y0(GLIBC_2.0) [SUSv4]	y0f(GLIBC_2.0) [LSB]	y0l(GLIBC_2.0) [LSB]	y1(GLIBC_2.0) [SUSv4]
y1f(GLIBC_2.0) [LSB]	y1l(GLIBC_2.0) [LSB]	yn(GLIBC_2.0) [SUSv4]	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) [SUSv4]			

10.6 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.

10.6.1 complex.h

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

10.6.2 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)
```

10.6.3 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) ? __isinff (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_VALL       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);
```

10.7 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 10.5 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 1003.1-2008 (ISO/IEC 9945-2009), 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 1003.1-2008 (ISO/IEC 9945-2009), 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.

10.8 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] LSB Core - Generic
[SUSv3] POSIX 1003.1-2001 (ISO/IEC 9945-2003)
[SUSv4] POSIX 1003.1-2008 (ISO/IEC 9945-2009)

10.8.1 Realtime Threads

10.8.1.1 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) [SUSv4]	pthread_attr_getschedpolicy(GLIBC_2.0) [SUSv4]	pthread_attr_getscope(GLIBC_2.0) [SUSv4]	pthread_attr_setinheritsched(GLIBC_2.0) [SUSv4]
pthread_attr_setschedpolicy(GLIBC_2.0) [SUSv4]	pthread_attr_setscope(GLIBC_2.0) [SUSv4]	pthread_getschedparam(GLIBC_2.0) [SUSv4]	pthread_setschedparam(GLIBC_2.0) [SUSv4]

10.8.2 Advanced Realtime Threads

10.8.2.1 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) [SUSv4]	pthread_barrier_init(GLIBC_2.2) [SUSv4]	pthread_barrier_wait(GLIBC_2.2) [SUSv4]	pthread_barrierattr_destroy(GLIBC_2.2) [SUSv4]
pthread_barrierattr_init(GLIBC_2.2) [SUSv4]	pthread_barrierattr_setpshared(GLIBC_2.2) [SUSv4]	pthread_getcpuclockid(GLIBC_2.2) [SUSv4]	pthread_spin_destroy(GLIBC_2.2) [SUSv4]
pthread_spin_init(GLIBC_2.2) [SUSv4]	pthread_spin_lock(GLIBC_2.2) [SUSv4]	pthread_spin_trylock(GLIBC_2.2) [SUSv4]	pthread_spin_unlock(GLIBC_2.2) [SUSv4]

10.8.3 Posix Threads

10.8.3.1 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) [SUSv4]	pthread_attr_getdetachstate(GLIBC_2.0) [SUSv4]
pthread_attr_getguardsize(GLIBC_2.1) [SUSv4]	pthread_attr_getschedparam(GLIBC_2.0) [SUSv4]	pthread_attr_getstack(GLIBC_2.2) [SUSv4]	pthread_attr_getstackaddr(GLIBC_2.1) [SUSv3]

pthread_attr_getstacksize(GLIBC_2.1) [SUSv4]	pthread_attr_init(GLIBC_2.1) [SUSv4]	pthread_attr_setdetachstate(GLIBC_2.0) [SUSv4]	pthread_attr_setguardsize(GLIBC_2.1) [SUSv4]
pthread_attr_setschedparam(GLIBC_2.0) [SUSv4]	pthread_attr_setstack(GLIBC_2.2) [SUSv4]	pthread_attr_setstackaddr(GLIBC_2.1) [SUSv3]	pthread_attr_setstacksize(GLIBC_2.1) [SUSv4]
pthread_cancel(GLIBC_2.0) [SUSv4]	pthread_cond_broadcast(GLIBC_2.3.2) [SUSv4]	pthread_cond_destroy(GLIBC_2.3.2) [SUSv4]	pthread_cond_init(GLIBC_2.3.2) [SUSv4]
pthread_cond_signal(GLIBC_2.3.2) [SUSv4]	pthread_cond_timedwait(GLIBC_2.3.2) [SUSv4]	pthread_cond_wait(GLIBC_2.3.2) [SUSv4]	pthread_condattr_destroy(GLIBC_2.0) [SUSv4]
pthread_condattr_getpshared(GLIBC_2.2) [SUSv4]	pthread_condattr_init(GLIBC_2.0) [SUSv4]	pthread_condattr_setpshared(GLIBC_2.2) [SUSv4]	pthread_create(GLIBC_2.1) [SUSv4]
pthread_detach(GLIBC_2.0) [SUSv4]	pthread_equal(GLIBC_2.0) [SUSv4]	pthread_exit(GLIBC_2.0) [SUSv4]	pthread_getconcurrency(GLIBC_2.1) [SUSv4]
pthread_getspecific(GLIBC_2.0) [SUSv4]	pthread_join(GLIBC_2.0) [SUSv4]	pthread_key_create(GLIBC_2.0) [SUSv4]	pthread_key_delete(GLIBC_2.0) [SUSv4]
pthread_kill(GLIBC_2.0) [SUSv4]	pthread_mutex_destroy(GLIBC_2.0) [SUSv4]	pthread_mutex_init(GLIBC_2.0) [SUSv4]	pthread_mutex_lock(GLIBC_2.0) [SUSv4]
pthread_mutex_timedlock(GLIBC_2.2) [SUSv4]	pthread_mutex_trylock(GLIBC_2.0) [SUSv4]	pthread_mutex_unlock(GLIBC_2.0) [SUSv4]	pthread_mutexattr_destroy(GLIBC_2.0) [SUSv4]
pthread_mutexattr_getpshared(GLIBC_2.2) [SUSv4]	pthread_mutexattr_gettype(GLIBC_2.1) [SUSv4]	pthread_mutexattr_init(GLIBC_2.0) [SUSv4]	pthread_mutexattr_setpshared(GLIBC_2.2) [SUSv4]
pthread_mutexattr_settype(GLIBC_2.1) [SUSv4]	pthread_once(GLIBC_2.0) [SUSv4]	pthread_rwlock_destroy(GLIBC_2.1) [SUSv4]	pthread_rwlock_init(GLIBC_2.1) [SUSv4]
pthread_rwlock_rdlock(GLIBC_2.1) [SUSv4]	pthread_rwlock_timedrdlock(GLIBC_2.2) [SUSv4]	pthread_rwlock_timedwrlock(GLIBC_2.2) [SUSv4]	pthread_rwlock_tryrdlock(GLIBC_2.1) [SUSv4]
pthread_rwlock_trywrlock(GLIBC_2.1) [SUSv4]	pthread_rwlock_unlock(GLIBC_2.1) [SUSv4]	pthread_rwlock_wrlock(GLIBC_2.1) [SUSv4]	pthread_rwlockattr_destroy(GLIBC_2.1) [SUSv4]
pthread_rwlockattr_getpshared(GLIBC_2.1) [SUSv4]	pthread_rwlockattr_init(GLIBC_2.1) [SUSv4]	pthread_rwlockattr_setpshared(GLIBC_2.1) [SUSv4]	pthread_self(GLIBC_2.0) [SUSv4]

pthread_setcancelstate(GLIBC_2.0) [SUSv4]	pthread_setcanceltype(GLIBC_2.0) [SUSv4]	pthread_setconcurrency(GLIBC_2.1) [SUSv4]	pthread_setspecific(GLIBC_2.0) [SUSv4]
pthread_sigmask(GLIBC_2.0) [SUSv4]	pthread_testcancel(GLIBC_2.0) [SUSv4]	sem_close(GLIBC_2.1.1) [SUSv4]	sem_destroy(GLIBC_2.1) [SUSv4]
sem_getvalue(GLIBC_2.1) [SUSv4]	sem_init(GLIBC_2.1) [SUSv4]	sem_open(GLIBC_2.1.1) [SUSv4]	sem_post(GLIBC_2.1) [SUSv4]
sem_timedwait(GLIBC_2.2) [SUSv4]	sem_trywait(GLIBC_2.1) [SUSv4]	sem_unlink(GLIBC_2.1.1) [SUSv4]	sem_wait(GLIBC_2.1) [SUSv4]

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]		

10.8.4 Thread aware versions of libc interfaces

10.8.4.1 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) [SUSv4]	pread64(GLIBC_2.2) [LSB]
pwrite(GLIBC_2.2) [SUSv4]	pwrite64(GLIBC_2.2) [LSB]		

10.8.5 GNU Extensions for libpthread

10.8.5.1 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]		

10.8.6 System Calls

10.8.6.1 Interfaces for System Calls

An LSB conforming implementation shall provide the architecture specific functions for System Calls specified in Table 10-47, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-47 libpthread - System Calls Function Interfaces

close(GLIBC_2.0) [SUSv4]	fcntl(GLIBC_2.0) [LSB]	fork(GLIBC_2.0) [SUSv4]	fsync(GLIBC_2.0) [SUSv4]
lseek(GLIBC_2.0) [SUSv4]	msync(GLIBC_2.0) [SUSv4]	nanosleep(GLIBC_2.0) [SUSv4]	open(GLIBC_2.0) [SUSv4]
pause(GLIBC_2.0) [SUSv4]	read(GLIBC_2.0) [SUSv4]	vfork(GLIBC_2.0) [SUSv3]	wait(GLIBC_2.0) [SUSv4]
waitpid(GLIBC_2.0) [LSB]	write(GLIBC_2.0) [SUSv4]		

10.8.7 Standard I/O

10.8.7.1 Interfaces for Standard I/O

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

Table 10-48 libpthread - Standard I/O Function Interfaces

flockfile(GLIBC_2.0) [SUSv4]			

10.8.8 Signal Handling

10.8.8.1 Interfaces for Signal Handling

An LSB conforming implementation shall provide the architecture specific functions for Signal Handling specified in Table 10-49, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-49 libpthread - Signal Handling Function Interfaces

__libc_current_sigrtmax(GLIBC_2.1) [LSB]	__libc_current_sigrtmin(GLIBC_2.1) [LSB]	raise(GLIBC_2.0) [SUSv4]	sigaction(GLIBC_2.0) [SUSv4]

siglongjmp(GLIBC_2.0) [SUSv4]	sigwait(GLIBC_2.0) [SUSv4]		

10.8.9 Standard Library

10.8.9.1 Interfaces for Standard Library

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

Table 10-50 libpthread - Standard Library Function Interfaces

__errno_location(GLIBC_2.0) [LSB]	ftrylockfile(GLIBC_2.0) [SUSv4]	funlockfile(GLIBC_2.0) [SUSv4]	longjmp(GLIBC_2.0) [SUSv4]
system(GLIBC_2.0) [LSB]			

10.8.10 Socket Interface

10.8.10.1 Interfaces for Socket Interface

An LSB conforming implementation shall provide the architecture specific functions for Socket Interface specified in Table 10-51, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-51 libpthread - Socket Interface Function Interfaces

__h_errno_location(GLIBC_2.0) [LSB]	accept(GLIBC_2.0) [SUSv4]	connect(GLIBC_2.0) [SUSv4]	recv(GLIBC_2.0) [SUSv4]
recvfrom(GLIBC_2.0) [SUSv4]	recvmsg(GLIBC_2.0) [SUSv4]	send(GLIBC_2.0) [SUSv4]	sendmsg(GLIBC_2.0) [SUSv4]
sendto(GLIBC_2.0) [SUSv4]			

10.8.11 Terminal Interface Functions

10.8.11.1 Interfaces for Terminal Interface Functions

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

Table 10-52 libpthread - Terminal Interface Functions Function Interfaces

tcdrain(GLIBC_2.0) [SUSv4]			

10.9 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.

10.9.1 lsb/pthread.h

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

10.9.2 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 } }
#define PTHREAD_MUTEX_INITIALIZER       { { 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;
```

10.9.3 semaphore.h

```
#define __SIZEOF_SEM_T  16
```

10.10 Interfaces for libgcc_s

Table 10-53 defines the library name and shared object name for the libgcc_s library

Table 10-53 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] LSB Core - Generic

10.10.1 Unwind Library

10.10.1.1 Interfaces for Unwind Library

An LSB conforming implementation shall provide the architecture specific functions for Unwind Library specified in Table 10-54, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-54 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_Find_FDE(GCC_3.0) [LSB]
_Unwind_ForcedUnwind(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]			

10.11 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.

10.11.1 unwind.h

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

10.12 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 10.10 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.

10.13 Interfaces for libdl

Table 10-55 defines the library name and shared object name for the libdl library

Table 10-55 libdl Definition

Library:	libdl
SONAME:	libdl.so.2

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

[LSB] LSB Core - Generic
[SUSv4] POSIX 1003.1-2008 (ISO/IEC 9945-2009)

10.13.1 Dynamic Loader

10.13.1.1 Interfaces for Dynamic Loader

An LSB conforming implementation shall provide the architecture specific functions for Dynamic Loader specified in Table 10-56, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-56 libdl - Dynamic Loader Function Interfaces

dladdr(GLIBC_2.0) [LSB]	dlclose(GLIBC_2.0) [SUSv4]	dlerror(GLIBC_2.0) [SUSv4]	dlopen(GLIBC_2.1) [LSB]
dlsym(GLIBC_2.0) [LSB]	dlvsym(GLIBC_2.1) [LSB]		

10.14 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.

10.14.1 dlfcn.h

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

10.15 Interfaces for libcrypt

Table 10-57 defines the library name and shared object name for the libcrypt library

Table 10-57 libcrypt Definition

Library:	libcrypt
SONAME:	libcrypt.so.1

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

[LSB] LSB Core - Generic
[SUSv4] POSIX 1003.1-2008 (ISO/IEC 9945-2009)

10.15.1 Encryption

10.15.1.1 Interfaces for Encryption

An LSB conforming implementation shall provide the architecture specific functions for Encryption specified in Table 10-58, with the full mandatory functionality as described in the referenced underlying specification.

Table 10-58 libcrypt - Encryption Function Interfaces

crypt(GLIBC_2.0) [SUSv4]	crypt_r(GLIBC_2.0) [LSB]	encrypt(GLIBC_2.0) [SUSv4]	encrypt_r(GLIBC_2.0) [LSB]
setkey(GLIBC_2.0) [SUSv4]	setkey_r(GLIBC_2.0) [LSB]		

10.16 Data Definitions for libcrypt

This section defines global identifiers and their values that are associated with interfaces contained in libcrypt. 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.

10.16.1 crypt.h

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


IV Utility Libraries

11 Libraries

An LSB-conforming implementation shall also support the following 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 libncursesw

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

Table 11-3 libncursesw Definition

Library:	libncursesw
SONAME:	libncursesw.so.5

11.5.1 Curses Wide

11.5.1.1 Interfaces for Curses Wide

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

11.6 Data Definitions for libncursesw

This section defines global identifiers and their values that are associated with interfaces contained in libncursesw. 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.

11.6.1 ncursesw/curses.h

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

11.6.2 ncursesw/ncurses_dll.h

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

11.6.3 ncursesw/term.h

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

11.6.4 ncursesw/unctrl.h

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

11.7 Interfaces for libutil

Table 11-4 defines the library name and shared object name for the libutil library

Table 11-4 libutil Definition

Library:	libutil
SONAME:	libutil.so.1

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

[LSB] LSB Core - Generic

11.7.1 Utility Functions

11.7.1.1 Interfaces for Utility Functions

An LSB conforming implementation shall provide the architecture specific functions for Utility Functions specified in Table 11-5, with the full mandatory functionality as described in the referenced underlying specification.

Table 11-5 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 Base Libraries

12 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.

12.1 Interfaces for libstdcxx

Table 12-1 defines the library name and shared object name for the libstdcxx library

Table 12-1 libstdcxx Definition

Library:	libstdcxx
SONAME:	libstdc++.so.6

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

[CXXABI-1.86] Itanium™ C++ ABI
[ISOCXX] ISO/IEC 14882: 2003 C++ Language
[LSB] LSB Core - Generic

12.1.1 C++ Runtime Support

12.1.1.1 Interfaces for C++ Runtime Support

An LSB conforming implementation shall provide the architecture specific methods for C++ Runtime Support specified in Table 12-2, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-2 libstdcxx - C++ Runtime Support Function Interfaces

operator new[](unsigned int)(GLIBCXX_3.4) [ISOCXX]
operator new[](unsigned int, nothrow_t const&)(GLIBCXX_3.4) [ISOCXX]
operator new(unsigned int)(GLIBCXX_3.4) [ISOCXX]
operator new(unsigned int, nothrow_t const&)(GLIBCXX_3.4) [ISOCXX]

12.1.2 C++ type descriptors for built-in types

12.1.2.1 Interfaces for C++ type descriptors for built-in types

No external methods are defined for libstdcxx - C++ type descriptors for built-in types in this part of the specification. See also the generic specification.

12.1.3 C++ _Rb_tree

12.1.3.1 Interfaces for C++ _Rb_tree

No external methods are defined for libstdcxx - C++ _Rb_tree in this part of the specification. See also the generic specification.

12.1.4 Class type_info

12.1.4.1 Class data for type_info

The virtual table for the std::type_info class is described in the generic part of this specification.

The Run Time Type Information for the std::type_info class is described by Table 12-3

Table 12-3 typeinfo for type_info

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for type_info

12.1.4.2 Interfaces for Class type_info

No external methods are defined for libstdcxx - Class std::type_info in this part of the specification. See also the generic specification.

12.1.5 Class __cxxabiv1::__enum_type_info

12.1.5.1 Class data for __cxxabiv1::__enum_type_info

The virtual table for the __cxxabiv1::__enum_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__enum_type_info class is described by Table 12-4

Table 12-4 typeinfo for __cxxabiv1::__enum_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__enum_type_info

12.1.5.2 Interfaces for Class __cxxabiv1::__enum_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__enum_type_info in this part of the specification. See also the generic specification.

12.1.6 Class __cxxabiv1::__array_type_info

12.1.6.1 Class data for __cxxabiv1::__array_type_info

The virtual table for the __cxxabiv1::__array_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__array_type_info class is described by Table 12-5

Table 12-5 typeinfo for __cxxabiv1::__array_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info

Name	typeinfo name for __cxxabiv1::__array_type_info

12.1.6.2 Interfaces for Class __cxxabiv1::__array_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__array_type_info in this part of the specification. See also the generic specification.

12.1.7 Class __cxxabiv1::__class_type_info

12.1.7.1 Class data for __cxxabiv1::__class_type_info

The virtual table for the __cxxabiv1::__class_type_info class is described by Table 12-6

Table 12-6 Primary vtable for __cxxabiv1::__class_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__class_type_info
vfunc[0]:	__cxxabiv1::__class_type_info::~__class_type_info()
vfunc[1]:	__cxxabiv1::__class_type_info::~__class_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const
vfunc[6]:	__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const
vfunc[7]:	__cxxabiv1::__class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyncast_result&) const

vfunc[8]:	__cxxabiv1::__class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const

The Run Time Type Information for the __cxxabiv1::__class_type_info class is described by Table 12-7

Table 12-7 typeinfo for __cxxabiv1::__class_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__class_type_info

12.1.7.2 Interfaces for Class __cxxabiv1::__class_type_info

An LSB conforming implementation shall provide the architecture specific methods for Class __cxxabiv1::__class_type_info specified in Table 12-8, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-8 libstdcxx - Class __cxxabiv1::__class_type_info Function Interfaces

__cxxabiv1::__class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyncast_result&) const(CXXABI_1.3) [CXXABI-1.86]
__cxxabiv1::__class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [CXXABI-1.86]

12.1.8 Class __cxxabiv1::__pbase_type_info

12.1.8.1 Class data for __cxxabiv1::__pbase_type_info

The virtual table for the __cxxabiv1::__pbase_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__pbase_type_info class is described by Table 12-9

Table 12-9 typeinfo for __cxxabiv1::__pbase_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__pbase_type_info

12.1.8.2 Interfaces for Class __cxxabiv1::__pbase_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__pbase_type_info in this part of the specification. See also the generic specification.

12.1.9 Class __cxxabiv1::__pointer_type_info

12.1.9.1 Class data for __cxxabiv1::__pointer_type_info

The virtual table for the __cxxabiv1::__pointer_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__pointer_type_info class is described by Table 12-10

Table 12-10 typeinfo for __cxxabiv1::__pointer_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__pointer_type_info

12.1.9.2 Interfaces for Class __cxxabiv1::__pointer_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__pointer_type_info in this part of the specification. See also the generic specification.

12.1.10 Class __cxxabiv1::__function_type_info

12.1.10.1 Class data for __cxxabiv1::__function_type_info

The virtual table for the __cxxabiv1::__function_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__function_type_info class is described by Table 12-11

Table 12-11 typeinfo for __cxxabiv1::__function_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__function_type_info

12.1.10.2 Interfaces for Class __cxxabiv1::__function_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__function_type_info in this part of the specification. See also the generic specification.

12.1.11 Class __cxxabiv1::__si_class_type_info

12.1.11.1 Class data for __cxxabiv1::__si_class_type_info

The virtual table for the __cxxabiv1::__si_class_type_info class is described by Table 12-12

Table 12-12 Primary vtable for __cxxabiv1::__si_class_type_info

Base Offset	0

Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__si_class_type_info
vfunc[0]:	__cxxabiv1::__si_class_type_info::~__si_class_type_info()
vfunc[1]:	__cxxabiv1::__si_class_type_info::~__si_class_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const
vfunc[6]:	__cxxabiv1::__si_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const
vfunc[7]:	__cxxabiv1::__si_class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyncast_result&) const
vfunc[8]:	__cxxabiv1::__si_class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const

The Run Time Type Information for the __cxxabiv1::__si_class_type_info class is described by Table 12-13

Table 12-13 typeinfo for __cxxabiv1::__si_class_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__si_class_type_info

12.1.11.2 Interfaces for Class __cxxabiv1::__si_class_type_info

An LSB conforming implementation shall provide the architecture specific methods for Class __cxxabiv1::__si_class_type_info specified in Table 12-14, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-14 libstdcxx - Class __cxxabiv1::__si_class_type_info Function Interfaces

__cxxabiv1::__si_class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyncast_result&) const(CXXABI_1.3) [CXXABI-1.86]
__cxxabiv1::__si_class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [CXXABI-1.86]

12.1.12 Class __cxxabiv1::__vmi_class_type_info

12.1.12.1 Class data for __cxxabiv1::__vmi_class_type_info

The virtual table for the __cxxabiv1::__vmi_class_type_info class is described by Table 12-15

Table 12-15 Primary vtable for __cxxabiv1::__vmi_class_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__vmi_class_type_info
vfunc[0]:	__cxxabiv1::__vmi_class_type_info::~__vmi_class_type_info()
vfunc[1]:	__cxxabiv1::__vmi_class_type_info::~__vmi_class_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const
vfunc[6]:	__cxxabiv1::__vmi_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const

vfunc[7]:	__cxxabiv1::__vmi_class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyn cast_result&) const
vfunc[8]:	__cxxabiv1::__vmi_class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const

The Run Time Type Information for the __cxxabiv1::__vmi_class_type_info class is described by Table 12-16

Table 12-16 typeinfo for __cxxabiv1::__vmi_class_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__vmi_class_type_info

12.1.12.2 Interfaces for Class __cxxabiv1::__vmi_class_type_info

An LSB conforming implementation shall provide the architecture specific methods for Class __cxxabiv1::__vmi_class_type_info specified in Table 12-17, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-17 libstdcxx - Class __cxxabiv1::__vmi_class_type_info Function Interfaces

__cxxabiv1::__vmi_class_type_info::__do_dyncast(int, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dyncast_result&) const(CXXABI_1.3) [CXXABI-1.86]
__cxxabiv1::__vmi_class_type_info::__do_find_public_src(int, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [CXXABI-1.86]

12.1.13 Class __cxxabiv1::__fundamental_type_info

12.1.13.1 Class data for __cxxabiv1::__fundamental_type_info

The virtual table for the __cxxabiv1::__fundamental_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__fundamental_type_info class is described by Table 12-18

Table 12-18 typeinfo for __cxxabiv1::__fundamental_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__fundamental_type_info

12.1.13.2 Interfaces for Class __cxxabiv1::__fundamental_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__fundamental_type_info in this part of the specification. See also the generic specification.

12.1.14 Class __cxxabiv1::__pointer_to_member_type_info

12.1.14.1 Class data for __cxxabiv1::__pointer_to_member_type_info

The virtual table for the __cxxabiv1::__pointer_to_member_type_info class is described in the generic part of this specification.

The Run Time Type Information for the __cxxabiv1::__pointer_to_member_type_info class is described by Table 12-19

Table 12-19 typeinfo for __cxxabiv1::__pointer_to_member_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__pointer_to_member_type_info

12.1.14.2 Interfaces for Class __cxxabiv1::__pointer_to_member_type_info

No external methods are defined for libstdcxx - Class __cxxabiv1::__pointer_to_member_type_info in this part of the specification. See also the generic specification.

12.1.15 Class __gnu_cxx::stdio_filebuf<char, char_traits<char> >

12.1.15.1 Interfaces for Class __gnu_cxx::stdio_filebuf<char, char_traits<char> >

No external methods are defined for libstdcxx - Class __gnu_cxx::stdio_filebuf<char, std::char_traits<char> > in this part of the specification. See also the generic specification.

12.1.16 Class __gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t> >

12.1.16.1 Interfaces for Class __gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t> >

No external methods are defined for libstdcxx - Class __gnu_cxx::stdio_filebuf<wchar_t, std::char_traits<wchar_t> > in this part of the specification. See also the generic specification.

12.1.17 Class __gnu_cxx::__pool_alloc_base

12.1.17.1 Interfaces for Class __gnu_cxx::__pool_alloc_base

An LSB conforming implementation shall provide the architecture specific methods for Class __gnu_cxx::__pool_alloc_base specified in Table 12-20, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-20 libstdcxx - Class __gnu_cxx::__pool_alloc_base Function Interfaces

__gnu_cxx::__pool_alloc_base::_M_get_free_list(unsigned int)(GLIBCXX_3.4.2) [LSB]
__gnu_cxx::__pool_alloc_base::_M_refill(unsigned int)(GLIBCXX_3.4.2) [LSB]

12.1.18 Class __gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >

12.1.18.1 Class data for __gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >

The virtual table for the __gnu_cxx::stdio_sync_filebuf<char, std::char_traits<char> > class is described by Table 12-21

Table 12-21 Primary vtable for __gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >
vfunc[0]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::~stdio_sync_filebuf()
vfunc[1]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::~stdio_sync_filebuf()
vfunc[2]:	basic_streambuf<char, char_traits<char> >::imbue(locale const&)

vfunc[3]:	basic_streambuf<char, char_traits<char> >::setbuf(char*, int)
vfunc[4]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::sync()
vfunc[7]:	basic_streambuf<char, char_traits<char> >::showmanyc()
vfunc[8]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::xsgetn(char*, int)
vfunc[9]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::underflow()
vfunc[10]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::uflow()
vfunc[11]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::pbackfail(int)
vfunc[12]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::xsputn(char const*, int)
vfunc[13]:	__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >::overflow(int)

12.1.18.2 Interfaces for Class __gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >

No external methods are defined for libstdcxx - Class __gnu_cxx::stdio_sync_filebuf<char, std::char_traits<char> > in this part of the specification. See also the generic specification.

12.1.19 Class __gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >

12.1.19.1 Class data for __gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >

The virtual table for the __gnu_cxx::stdio_sync_filebuf<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-22

Table 12-22 Primary vtable for __gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >

Base Offset	0

Virtual Base Offset	0
RTTI	typeinfo for __gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >
vfunc[0]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::~stdio_sync_filebuf()
vfunc[1]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::~stdio_sync_filebuf()
vfunc[2]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)
vfunc[3]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, int)
vfunc[4]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::sync()
vfunc[7]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::showmanyc()
vfunc[8]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)
vfunc[9]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::underflow()
vfunc[10]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::uflow()
vfunc[11]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::pbackfail(unsigned int)
vfunc[12]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)

vfunc[13]:	__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >::overflow(unsigned int)

12.1.19.2 Interfaces for Class __gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >

No external methods are defined for libstdcxx - Class __gnu_cxx::stdio_sync_filebuf<wchar_t, std::char_traits<wchar_t> > in this part of the specification. See also the generic specification.

12.1.20 Class exception

12.1.20.1 Class data for exception

The virtual table for the std::exception class is described in the generic part of this specification.

The Run Time Type Information for the std::exception class is described by Table 12-23

Table 12-23 typeinfo for exception

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for exception

12.1.20.2 Interfaces for Class exception

No external methods are defined for libstdcxx - Class std::exception in this part of the specification. See also the generic specification.

12.1.21 Class bad_typeid

12.1.21.1 Class data for bad_typeid

The virtual table for the std::bad_typeid class is described in the generic part of this specification.

The Run Time Type Information for the std::bad_typeid class is described by Table 12-24

Table 12-24 typeinfo for bad_typeid

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_typeid

12.1.21.2 Interfaces for Class bad_typeid

No external methods are defined for libstdcxx - Class std::bad_typeid in this part of the specification. See also the generic specification.

12.1.22 Class logic_error

12.1.22.1 Class data for logic_error

The virtual table for the std::logic_error class is described in the generic part of this specification.

The Run Time Type Information for the std::logic_error class is described by Table 12-25

Table 12-25 typeinfo for logic_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for logic_error

12.1.22.2 Interfaces for Class logic_error

No external methods are defined for libstdcxx - Class std::logic_error in this part of the specification. See also the generic specification.

12.1.23 Class range_error

12.1.23.1 Class data for range_error

The virtual table for the std::range_error class is described in the generic part of this specification.

The Run Time Type Information for the std::range_error class is described by Table 12-26

Table 12-26 typeinfo for range_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for range_error

12.1.23.2 Interfaces for Class range_error

No external methods are defined for libstdcxx - Class std::range_error in this part of the specification. See also the generic specification.

12.1.24 Class domain_error

12.1.24.1 Class data for domain_error

The virtual table for the std::domain_error class is described in the generic part of this specification.

The Run Time Type Information for the std::domain_error class is described by Table 12-27

Table 12-27 typeinfo for domain_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for domain_error

12.1.24.2 Interfaces for Class domain_error

No external methods are defined for libstdcxx - Class std::domain_error in this part of the specification. See also the generic specification.

12.1.25 Class length_error

12.1.25.1 Class data for length_error

The virtual table for the std::length_error class is described in the generic part of this specification.

The Run Time Type Information for the std::length_error class is described by Table 12-28

Table 12-28 typeinfo for length_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for length_error

12.1.25.2 Interfaces for Class length_error

No external methods are defined for libstdcxx - Class std::length_error in this part of the specification. See also the generic specification.

12.1.26 Class out_of_range

12.1.26.1 Class data for out_of_range

The virtual table for the std::out_of_range class is described in the generic part of this specification.

The Run Time Type Information for the std::out_of_range class is described by Table 12-29

Table 12-29 typeinfo for out_of_range

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for out_of_range

12.1.26.2 Interfaces for Class out_of_range

No external methods are defined for libstdcxx - Class std::out_of_range in this part of the specification. See also the generic specification.

12.1.27 Class bad_exception

12.1.27.1 Class data for bad_exception

The virtual table for the std::bad_exception class is described in the generic part of this specification.

The Run Time Type Information for the std::bad_exception class is described by Table 12-30

Table 12-30 typeinfo for bad_exception

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_exception

12.1.27.2 Interfaces for Class bad_exception

No external methods are defined for libstdcxx - Class std::bad_exception in this part of the specification. See also the generic specification.

12.1.28 Class runtime_error

12.1.28.1 Class data for runtime_error

The virtual table for the std::runtime_error class is described in the generic part of this specification.

The Run Time Type Information for the std::runtime_error class is described by Table 12-31

Table 12-31 typeinfo for runtime_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for runtime_error

12.1.28.2 Interfaces for Class runtime_error

No external methods are defined for libstdcxx - Class std::runtime_error in this part of the specification. See also the generic specification.

12.1.29 Class overflow_error

12.1.29.1 Class data for overflow_error

The virtual table for the std::overflow_error class is described in the generic part of this specification.

The Run Time Type Information for the std::overflow_error class is described by Table 12-32

Table 12-32 typeinfo for overflow_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for overflow_error

12.1.29.2 Interfaces for Class overflow_error

No external methods are defined for libstdcxx - Class std::overflow_error in this part of the specification. See also the generic specification.

12.1.30 Class underflow_error

12.1.30.1 Class data for underflow_error

The virtual table for the std::underflow_error class is described in the generic part of this specification.

The Run Time Type Information for the std::underflow_error class is described by Table 12-33

Table 12-33 typeinfo for underflow_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for underflow_error

12.1.30.2 Interfaces for Class underflow_error

No external methods are defined for libstdcxx - Class std::underflow_error in this part of the specification. See also the generic specification.

12.1.31 Class invalid_argument

12.1.31.1 Class data for invalid_argument

The virtual table for the std::invalid_argument class is described in the generic part of this specification.

The Run Time Type Information for the std::invalid_argument class is described by Table 12-34

Table 12-34 typeinfo for invalid_argument

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for invalid_argument

12.1.31.2 Interfaces for Class invalid_argument

No external methods are defined for libstdcxx - Class std::invalid_argument in this part of the specification. See also the generic specification.

12.1.32 Class bad_cast

12.1.32.1 Class data for bad_cast

The virtual table for the std::bad_cast class is described in the generic part of this specification.

The Run Time Type Information for the std::bad_cast class is described by Table 12-35

Table 12-35 typeinfo for bad_cast

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_cast

12.1.32.2 Interfaces for Class bad_cast

No external methods are defined for libstdcxx - Class std::bad_cast in this part of the specification. See also the generic specification.

12.1.33 Class bad_alloc

12.1.33.1 Class data for bad_alloc

The virtual table for the std::bad_alloc class is described in the generic part of this specification.

The Run Time Type Information for the std::bad_alloc class is described by Table 12-36

Table 12-36 typeinfo for bad_alloc

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_alloc

12.1.33.2 Interfaces for Class bad_alloc

No external methods are defined for libstdcxx - Class std::bad_alloc in this part of the specification. See also the generic specification.

12.1.34 struct __numeric_limits_base

12.1.34.1 Interfaces for struct __numeric_limits_base

No external methods are defined for libstdcxx - struct __numeric_limits_base in this part of the specification. See also the generic specification.

12.1.35 struct numeric_limits<long double>

12.1.35.1 Interfaces for struct numeric_limits<long double>

No external methods are defined for libstdcxx - struct numeric_limits<long double> in this part of the specification. See also the generic specification.

12.1.36 struct numeric_limits<long long>

12.1.36.1 Interfaces for struct numeric_limits<long long>

No external methods are defined for libstdcxx - struct numeric_limits<long long> in this part of the specification. See also the generic specification.

12.1.37 struct numeric_limits<unsigned long long>

12.1.37.1 Interfaces for struct numeric_limits<unsigned long long>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned long long> in this part of the specification. See also the generic specification.

12.1.38 struct numeric_limits<float>

12.1.38.1 Interfaces for struct numeric_limits<float>

No external methods are defined for libstdcxx - struct numeric_limits<float> in this part of the specification. See also the generic specification.

12.1.39 struct numeric_limits<double>

12.1.39.1 Interfaces for struct numeric_limits<double>

No external methods are defined for libstdcxx - struct numeric_limits<double> in this part of the specification. See also the generic specification.

12.1.40 struct numeric_limits<short>

12.1.40.1 Interfaces for struct numeric_limits<short>

No external methods are defined for libstdcxx - struct numeric_limits<short> in this part of the specification. See also the generic specification.

12.1.41 struct numeric_limits<unsigned short>

12.1.41.1 Interfaces for struct numeric_limits<unsigned short>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned short> in this part of the specification. See also the generic specification.

12.1.42 struct numeric_limits<int>

12.1.42.1 Interfaces for struct numeric_limits<int>

No external methods are defined for libstdcxx - struct numeric_limits<int> in this part of the specification. See also the generic specification.

12.1.43 struct numeric_limits<unsigned int>

12.1.43.1 Interfaces for struct numeric_limits<unsigned int>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned int> in this part of the specification. See also the generic specification.

12.1.44 struct numeric_limits<long>

12.1.44.1 Interfaces for struct numeric_limits<long>

No external methods are defined for libstdcxx - struct numeric_limits<long> in this part of the specification. See also the generic specification.

12.1.45 struct numeric_limits<unsigned long>

12.1.45.1 Interfaces for struct numeric_limits<unsigned long>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned long> in this part of the specification. See also the generic specification.

12.1.46 struct numeric_limits<wchar_t>

12.1.46.1 Interfaces for struct numeric_limits<wchar_t>

No external methods are defined for libstdcxx - struct numeric_limits<wchar_t> in this part of the specification. See also the generic specification.

12.1.47 struct numeric_limits<unsigned char>

12.1.47.1 Interfaces for struct numeric_limits<unsigned char>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned char> in this part of the specification. See also the generic specification.

12.1.48 struct numeric_limits<signed char>

12.1.48.1 Interfaces for struct numeric_limits<signed char>

No external methods are defined for libstdcxx - struct numeric_limits<signed char> in this part of the specification. See also the generic specification.

12.1.49 struct numeric_limits<char>

12.1.49.1 Interfaces for struct numeric_limits<char>

No external methods are defined for libstdcxx - struct numeric_limits<char> in this part of the specification. See also the generic specification.

12.1.50 struct numeric_limits<bool>

12.1.50.1 Interfaces for struct numeric_limits<bool>

No external methods are defined for libstdcxx - struct numeric_limits<bool> in this part of the specification. See also the generic specification.

12.1.51 Class ctype_base

12.1.51.1 Class data for ctype_base

The Run Time Type Information for the std::ctype_base class is described by Table 12-37.

Table 12-37 typeinfo for ctype_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for ctype_base

12.1.51.2 Interfaces for Class ctype_base

No external methods are defined for libstdcxx - Class std::ctype_base in this part of the specification. See also the generic specification.

12.1.52 Class __ctype_abstract_base<char>

12.1.52.1 Class data for __ctype_abstract_base<char>

The virtual table for the std::__ctype_abstract_base<char> class is described in the generic part of this specification.

12.1.52.2 Interfaces for Class __ctype_abstract_base<char>

No external methods are defined for libstdcxx - Class std::__ctype_abstract_base<char> in this part of the specification. See also the generic specification.

12.1.53 Class __ctype_abstract_base<wchar_t>

12.1.53.1 Class data for __ctype_abstract_base<wchar_t>

The virtual table for the std::__ctype_abstract_base<wchar_t> class is described in the generic part of this specification.

12.1.53.2 Interfaces for Class __ctype_abstract_base<wchar_t>

No external methods are defined for libstdcxx - Class std::__ctype_abstract_base<wchar_t> in this part of the specification. See also the generic specification.

12.1.54 Class ctype<char>

12.1.54.1 Class data for ctype<char>

The virtual table for the std::ctype<char> class is described in the generic part of this specification.

12.1.54.2 Interfaces for Class ctype<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::ctype<char> specified in Table 12-38, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-38 libstdcxx - Class ctype<char> Function Interfaces

ctype<char>::ctype(__locale_struct*, unsigned short const*, bool, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<char>::ctype(unsigned short const*, bool, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<char>::ctype(__locale_struct*, unsigned short const*, bool, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<char>::ctype(unsigned short const*, bool, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.55 Class ctype<wchar_t>

12.1.55.1 Class data for ctype<wchar_t>

The virtual table for the std::ctype<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::ctype<wchar_t> class is described by Table 12-39

Table 12-39 typeinfo for ctype<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for ctype<wchar_t>

12.1.55.2 Interfaces for Class ctype<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::ctype<wchar_t> specified in Table 12-40, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-40 libstdcxx - Class ctype<wchar_t> Function Interfaces

ctype<wchar_t>::ctype(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::ctype(unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::ctype(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::ctype(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.56 Class ctype_byname<char>

12.1.56.1 Class data for ctype_byname<char>

The virtual table for the std::ctype_byname<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::ctype_byname<char> class is described by Table 12-41

Table 12-41 typeinfo for ctype_byname<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for ctype_byname<char>

12.1.56.2 Interfaces for Class ctype_byname<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::ctype_byname<char> specified in Table 12-42, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-42 libstdcxx - Class ctype_byname<char> Function Interfaces

ctype_byname<char>::ctype_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype_byname<char>::ctype_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.57 Class ctype_byname<wchar_t>

12.1.57.1 Class data for ctype_byname<wchar_t>

The virtual table for the std::ctype_byname<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::ctype_byname<wchar_t> class is described by Table 12-43

Table 12-43 typeinfo for ctype_byname<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for ctype_byname<wchar_t>

12.1.57.2 Interfaces for Class ctype_byname<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::ctype_byname<wchar_t> specified in Table 12-44, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-44 libstdcxx - Class ctype_byname<wchar_t> Function Interfaces

ctype_byname<wchar_t>::ctype_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
ctype_byname<wchar_t>::ctype_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.58 Class basic_string<char, char_traits<char>, allocator<char> >

12.1.58.1 Interfaces for Class basic_string<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_string<char, std::char_traits<char>, std::allocator<char> > specified in Table 12-45, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-45 libstdcxx - Class basic_string<char, char_traits<char>, allocator<char> > Function Interfaces

basic_string<char, char_traits<char>, allocator<char> >::find_last_of(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]

basic_string<char, char_traits<char>, allocator<char> >::find_last_of(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_of(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_of(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_of(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_of(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_of(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_of(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_check_length(unsigned int, unsigned int, char const*) const(GLIBCXX_3.4.5) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_not_of(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_not_of(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_not_of(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_last_not_of(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_not_of(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_not_of(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_not_of(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find_first_not_of(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::at(unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::copy(char*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]

basic_string<char, char_traits<char>, allocator<char> >::find(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::find(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rfind(char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rfind(char const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rfind(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rfind(char, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::substr(unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::compare(unsigned int, unsigned int, char const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::compare(unsigned int, unsigned int, char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::compare(unsigned int, unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::compare(unsigned int, unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_check(unsigned int, char const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_limit(unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::operator[](unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_construct(unsigned int, char, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_replace_aux(unsigned int, unsigned int, unsigned int, char)(GLIBCXX_3.4) [ISOCXX]

basic_string<char, char_traits<char>, allocator<char> >::_M_replace_safe(unsigned int, unsigned int, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::at(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_set_length_and_sharable(unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_clone(allocator<char> const&, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_S_create(unsigned int, unsigned int, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::erase(unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::append(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::append(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::append(unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::assign(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::assign(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::assign(unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::insert(__gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > >, unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::insert(unsigned int, char const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::insert(unsigned int, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::insert(unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::insert(unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_string<char, char_traits<char>, allocator<char> >::insert(unsigned int, unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::resize(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::resize(unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_copy(char*, char const*, unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_move(char*, char const*, unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > >, __gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > >, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > >, __gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > >, unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(unsigned int, unsigned int, char const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(unsigned int, unsigned int, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(unsigned int, unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(unsigned int, unsigned int, basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::replace(unsigned int, unsigned int, unsigned int, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::reserve(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_assign(char*, unsigned int, char)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_mutate(unsigned int, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(char const*, unsigned int, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_string<char, char_traits<char>, allocator<char> >::basic_string(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(unsigned int, char, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(char const*, unsigned int, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(basic_string<char, char_traits<char>, allocator<char> > const&, unsigned int, unsigned int, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::basic_string(unsigned int, char, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::operator[](unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.59 Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.59.1 Interfaces for Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_string<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in Table 12-46, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-46 libstdcxx - Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_of(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_of(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_of(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_of(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_of(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_of(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_of(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_of(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_check_length(unsigned int, unsigned int, char const*) const(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_not_of(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_not_of(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_not_of(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_last_not_of(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_not_of(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_not_of(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_not_of(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find_first_not_of(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::at(unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::copy(wchar_t*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::find(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rfind(wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rfind(wchar_t const*, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rfind(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rfind(wchar_t, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::substr(unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::compare(unsigned int, unsigned int, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::compare(unsigned int, unsigned int, wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::compare(unsigned int, unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::compare(unsigned int, unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_check(unsigned int, char const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_limit(unsigned int, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::operator[](unsigned int) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_S_construct(unsigned int, wchar_t, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_replace_aux(unsigned int, unsigned int, unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_replace_safe(unsigned int, unsigned int, wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::at(unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_Rep::_M_set_length_and_sharable(unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_Rep::_M_clone(allocator<wchar_t> const&, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_Rep::_S_create(unsigned int, unsigned int, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::erase(unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::append(wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::append(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::append(unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::assign(wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::assign(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::assign(unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(__gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > >, unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(unsigned int, wchar_t const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(unsigned int, wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::insert(unsigned int, unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::resize(unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::resize(unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_copy(wchar_t*, wchar_t const*, unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_move(wchar_t*, wchar_t const*, unsigned int)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(__gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > >, __gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > >, wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(__gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > >, __gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > >, unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(unsigned int, unsigned int, wchar_t const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(unsigned int, unsigned int, wchar_t const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(unsigned int, unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(unsigned int, unsigned int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::replace(unsigned int, unsigned int, unsigned int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::reserve(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_assign(wchar_t*, unsigned int, wchar_t)(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_mutate(unsigned int, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(wchar_t const*, unsigned int, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(unsigned int, wchar_t, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(wchar_t const*, unsigned int, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, unsigned int, unsigned int, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_string(unsigned int, wchar_t, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::operator[](unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.60 Class basic_stringstream<char, char_traits<char>, allocator<char> >

12.1.60.1 Class data for basic_stringstream<char, char_traits<char>, allocator<char> >

The virtual table for the std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-47

Table 12-47 Primary vtable for basic_stringstream<char, char_traits<char>, allocator<char> >

Base Offset	0
Virtual Base Offset	52
RTTI	typeinfo for basic_stringstream<char, char_traits<char>, allocator<char> >

vfunc[0]:	basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()
vfunc[1]:	basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()

Table 12-48 Secondary vtable for basic_stringstream<char, char_traits<char>, allocator<char> >

Base Offset	-8
Virtual Base Offset	44
RTTI	typeinfo for basic_stringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	non-virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()
vfunc[1]:	non-virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()

Table 12-49 Secondary vtable for basic_stringstream<char, char_traits<char>, allocator<char> >

Base Offset	-52
Virtual Base Offset	-52
RTTI	typeinfo for basic_stringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()
vfunc[1]:	virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()

The VTT for the std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-50

Table 12-50 VTT for basic_stringstream<char, char_traits<char>, allocator<char> >

VTT Name	_ZTTSt18basic_stringstreamIcSt11char_traitsIcESaIcEE
Number of Entries	10

12.1.60.2 Interfaces for Class basic_stringstream<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> > specified in Table 12-51, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-51 libstdcxx - Class basic_stringstream<char, char_traits<char>, allocator<char> > Function Interfaces

non-virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.61 Class basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.61.1 Class data for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-52

Table 12-52 Primary vtable for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	0
Virtual Base Offset	52
RTTI	typeinfo for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()
vfunc[1]:	basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()

Table 12-53 Secondary vtable for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	-8
Virtual Base Offset	44
RTTI	typeinfo for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	non-virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()
vfunc[1]:	non-virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()

Table 12-54 Secondary vtable for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	-52
Virtual Base Offset	-52
RTTI	typeinfo for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()
vfunc[1]:	virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()

The VTT for the std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-55

Table 12-55 VTT for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

VTT Name	_ZTTSt18basic_stringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	10

12.1.61.2 Interfaces for Class basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in Table 12-56, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-56 libstdcxx - Class basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

non-virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.62 Class basic_istringstream<char, char_traits<char>, allocator<char> >

12.1.62.1 Class data for basic_istringstream<char, char_traits<char>, allocator<char> >

The virtual table for the std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-57

Table 12-57 Primary vtable for basic_istringstream<char, char_traits<char>, allocator<char> >

Base Offset	0
Virtual Base Offset	48
RTTI	typeinfo for basic_istringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()
vfunc[1]:	basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()

Table 12-58 Secondary vtable for basic_istringstream<char, char_traits<char>, allocator<char> >

Base Offset	-48
Virtual Base Offset	-48

RTTI	typeinfo for basic_istringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	virtual thunk to basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()
vfunc[1]:	virtual thunk to basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()

The VTT for the std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-59

Table 12-59 VTT for basic_istringstream<char, char_traits<char>, allocator<char> >

VTT Name	_ZTTSt19basic_istringstreamIcSt11char_traitsIcESaIcEE
Number of Entries	4

12.1.62.2 Interfaces for Class basic_istringstream<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > specified in Table 12-60, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-60 libstdcxx - Class basic_istringstream<char, char_traits<char>, allocator<char> > Function Interfaces

virtual thunk to basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_istringstream<char, char_traits<char>, allocator<char> >::~basic_istringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.63 Class basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.63.1 Class data for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-61

Table 12-61 Primary vtable for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	0

Virtual Base Offset	48
RTTI	typeinfo for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()
vfunc[1]:	basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()

Table 12-62 Secondary vtable for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	-48
Virtual Base Offset	-48
RTTI	typeinfo for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	virtual thunk to basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()
vfunc[1]:	virtual thunk to basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()

The VTT for the std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-63

Table 12-63 VTT for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

VTT Name	_ZTTSt19basic_istringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	4

12.1.63.2 Interfaces for Class basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_istringstream<wchar_t, std::char_traits<wchar_t>,

std::allocator<wchar_t> > specified in Table 12-64, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-64 libstdcxx - Class basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

virtual thunk to basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_istringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.64 Class basic_ostringstream<char, char_traits<char>, allocator<char> >

12.1.64.1 Class data for basic_ostringstream<char, char_traits<char>, allocator<char> >

The virtual table for the std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-65

Table 12-65 Primary vtable for basic_ostringstream<char, char_traits<char>, allocator<char> >

Base Offset	0
Virtual Base Offset	44
RTTI	typeinfo for basic_ostringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	basic_ostringstream<char, char_traits<char>, allocator<char> >::~basic_ostringstream()
vfunc[1]:	basic_ostringstream<char, char_traits<char>, allocator<char> >::~basic_ostringstream()

Table 12-66 Secondary vtable for basic_ostringstream<char, char_traits<char>, allocator<char> >

Base Offset	-44
Virtual Base Offset	-44
RTTI	typeinfo for basic_ostringstream<char, char_traits<char>, allocator<char> >
vfunc[0]:	virtual thunk to basic_ostringstream<char, char_traits<char>, allocator<char> >::~basic_ostringstream()
vfunc[1]:	virtual thunk to basic_ostringstream<char,

	char_traits<char>, allocator<char> >::~basic_ostringstream()

The VTT for the std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-67

Table 12-67 VTT for basic_ostringstream<char, char_traits<char>, allocator<char> >

VTT Name	_ZTTSt19basic_ostringstreamIcSt11char_traitsIcESaIcEE
Number of Entries	4

12.1.64.2 Interfaces for Class basic_ostringstream<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char> > specified in Table 12-68, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-68 libstdcxx - Class basic_ostringstream<char, char_traits<char>, allocator<char> > Function Interfaces

virtual thunk to basic_ostringstream<char, char_traits<char>, allocator<char> >::~basic_ostringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ostringstream<char, char_traits<char>, allocator<char> >::~basic_ostringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.65 Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.65.1 Class data for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-69

Table 12-69 Primary vtable for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	0
Virtual Base Offset	44
RTTI	typeinfo for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()

vfunc[1]:	basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()

Table 12-70 Secondary vtable for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	-44
Virtual Base Offset	-44
RTTI	typeinfo for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	virtual thunk to basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()
vfunc[1]:	virtual thunk to basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()

The VTT for the std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-71

Table 12-71 VTT for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

VTT Name	_ZTTSt19basic_ostringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	4

12.1.65.2 Interfaces for Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in Table 12-72, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-72 libstdcxx - Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

virtual thunk to basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_ostringstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.66 Class basic_stringbuf<char, char_traits<char>, allocator<char> >

12.1.66.1 Class data for basic_stringbuf<char, char_traits<char>, allocator<char> >

The virtual table for the std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-73

Table 12-73 Primary vtable for basic_stringbuf<char, char_traits<char>, allocator<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_stringbuf<char, char_traits<char>, allocator<char> >
vfunc[0]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::~basic_stringbuf()
vfunc[1]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::~basic_stringbuf()
vfunc[2]:	basic_streambuf<char, char_traits<char> >::imbue(locale const&)
vfunc[3]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::setbuf(char*, int)
vfunc[4]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_streambuf<char, char_traits<char> >::sync()
vfunc[7]:	basic_streambuf<char, char_traits<char> >::showmanyc()
vfunc[8]:	basic_streambuf<char, char_traits<char> >::xsgetn(char*, int)
vfunc[9]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::underflow()

vfunc[10]:	basic_streambuf<char, char_traits<char> >::uflow()
vfunc[11]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::pbackfail(int)
vfunc[12]:	basic_streambuf<char, char_traits<char> >::xsputn(char const*, int)
vfunc[13]:	basic_stringbuf<char, char_traits<char>, allocator<char> >::overflow(int)

The Run Time Type Information for the std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> > class is described by Table 12-74

Table 12-74 typeinfo for basic_stringbuf<char, char_traits<char>, allocator<char> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for basic_stringbuf<char, char_traits<char>, allocator<char> >

12.1.66.2 Interfaces for Class basic_stringbuf<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> > specified in Table 12-75, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-75 libstdcxx - Class basic_stringbuf<char, char_traits<char>, allocator<char> > Function Interfaces

basic_stringbuf<char, char_traits<char>, allocator<char> >::setbuf(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::_M_sync(char*, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]

12.1.67 Class basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.67.1 Class data for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-76

Table 12-76 Primary vtable for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >
vfunc[0]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringbuf()
vfunc[1]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringbuf()
vfunc[2]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)
vfunc[3]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::setbuf(wchar_t*, int)
vfunc[4]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::sync()
vfunc[7]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::showmanyc()
vfunc[8]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)
vfunc[9]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::underflow()
vfunc[10]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::uflow()

vfunc[11]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::pbackfail(unsigned int)
vfunc[12]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)
vfunc[13]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::overflow(unsigned int)

The Run Time Type Information for the std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by Table 12-77

Table 12-77 typeinfo for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

12.1.67.2 Interfaces for Class basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in Table 12-78, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-78 libstdcxx - Class basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::setbuf(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_sync(wchar_t*, unsigned int, unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]

12.1.68 Class basic_iostream<char, char_traits<char> >

12.1.68.1 Class data for basic_iostream<char, char_traits<char> >

The virtual table for the std::basic_iostream<char, std::char_traits<char> > class is described by Table 12-79

Table 12-79 Primary vtable for basic_iostream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	12
RTTI	typeinfo for basic_iostream<char, char_traits<char> >
vfunc[0]:	basic_iostream<char, char_traits<char> >::~basic_iostream()
vfunc[1]:	basic_iostream<char, char_traits<char> >::~basic_iostream()

Table 12-80 Secondary vtable for basic_iostream<char, char_traits<char> >

Base Offset	-8
Virtual Base Offset	4
RTTI	typeinfo for basic_iostream<char, char_traits<char> >
vfunc[0]:	non-virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()
vfunc[1]:	non-virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()

Table 12-81 Secondary vtable for basic_iostream<char, char_traits<char> >

Base Offset	-12
Virtual Base Offset	-12
RTTI	typeinfo for basic_iostream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()
vfunc[1]:	virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()

The VTT for the std::basic_iostream<char, std::char_traits<char> > class is described by Table 12-82

Table 12-82 VTT for basic_iostream<char, char_traits<char> >

VTT Name	_ZTTSd
Number of Entries	7

12.1.68.2 Interfaces for Class basic_iostream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_iostream<char, std::char_traits<char> > specified in Table 12-83, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-83 libstdcxx - Class basic_iostream<char, char_traits<char> > Function Interfaces

non-virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.69 Class basic_iostream<wchar_t, char_traits<wchar_t> >

12.1.69.1 Class data for basic_iostream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_iostream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-84

Table 12-84 Primary vtable for basic_iostream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	12
RTTI	typeinfo for basic_iostream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()
vfunc[1]:	basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()

Table 12-85 Secondary vtable for basic_iostream<wchar_t, char_traits<wchar_t> >

Base Offset	-8
Virtual Base Offset	4
RTTI	typeinfo for basic_iostream<wchar_t, char_traits<wchar_t> >

vfunc[0]:	non-virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()
vfunc[1]:	non-virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()

Table 12-86 Secondary vtable for basic_iostream<wchar_t, char_traits<wchar_t> >

Base Offset	-12
Virtual Base Offset	-12
RTTI	typeinfo for basic_iostream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()
vfunc[1]:	virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()

The VTT for the std::basic_iostream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-87

Table 12-87 VTT for basic_iostream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt14basic_iostreamIwSt11char_traitsIwEE
Number of Entries	7

12.1.69.2 Interfaces for Class basic_iostream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_iostream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-88, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-88 libstdcxx - Class basic_iostream<wchar_t, char_traits<wchar_t> > Function Interfaces

non-virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]

virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_iostream<wchar_t, char_traits<wchar_t> >::~basic_iostream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.70 Class basic_istream<char, char_traits<char> >

12.1.70.1 Class data for basic_istream<char, char_traits<char> >

The virtual table for the std::basic_istream<char, std::char_traits<char> > class is described by Table 12-89

Table 12-89 Primary vtable for basic_istream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	8
RTTI	typeinfo for basic_istream<char, char_traits<char> >
vfunc[0]:	basic_istream<char, char_traits<char> >::~basic_istream()
vfunc[1]:	basic_istream<char, char_traits<char> >::~basic_istream()

Table 12-90 Secondary vtable for basic_istream<char, char_traits<char> >

Base Offset	-8
Virtual Base Offset	-8
RTTI	typeinfo for basic_istream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_istream<char, char_traits<char> >::~basic_istream()
vfunc[1]:	virtual thunk to basic_istream<char, char_traits<char> >::~basic_istream()

The VTT for the std::basic_istream<char, std::char_traits<char> > class is described by Table 12-91

Table 12-91 VTT for basic_istream<char, char_traits<char> >

VTT Name	_ZTTSi
Number of Entries	2

12.1.70.2 Interfaces for Class basic_istream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_istream<char, std::char_traits<char> > specified in

Table 12-92, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-92 libstdcxx - Class basic_istream<char, char_traits<char> > Function Interfaces

basic_istream<char, char_traits<char> >::get(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::get(char*, int, char)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::read(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::seekg(long long, _Ios_Seekdir)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::ignore(int)(GLIBCXX_3.4.5) [ISOCXX]
basic_istream<char, char_traits<char> >::ignore(int, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::getline(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::getline(char*, int, char)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::readsome(char*, int)(GLIBCXX_3.4) [ISOCXX]
virtual thunk to basic_istream<char, char_traits<char> >::~basic_istream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_istream<char, char_traits<char> >::~basic_istream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.71 Class basic_istream<wchar_t, char_traits<wchar_t> >

12.1.71.1 Class data for basic_istream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_istream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-93

Table 12-93 Primary vtable for basic_istream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	8
RTTI	typeinfo for basic_istream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()

vfunc[1]:	basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()

Table 12-94 Secondary vtable for basic_istream<wchar_t, char_traits<wchar_t> >

Base Offset	-8
Virtual Base Offset	-8
RTTI	typeinfo for basic_istream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()
vfunc[1]:	virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()

The VTT for the std::basic_istream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-95

Table 12-95 VTT for basic_istream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt13basic_istreamIwSt11char_traitsIwEE
Number of Entries	2

12.1.71.2 Interfaces for Class basic_istream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_istream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-96, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-96 libstdcxx - Class basic_istream<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_istream<wchar_t, char_traits<wchar_t> >::get(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::get(wchar_t*, int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::read(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::ignore(int)(GLIBCXX_3.4.5) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::ignore(int, unsigned int)(GLIBCXX_3.4) [ISOCXX]

basic_istream<wchar_t, char_traits<wchar_t> >::getline(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::getline(wchar_t*, int, wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::readsome(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~basic_istream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.72 Class istreambuf_iterator<wchar_t, char_traits<wchar_t> >

12.1.72.1 Interfaces for Class istreambuf_iterator<wchar_t, char_traits<wchar_t> >

No external methods are defined for libstdcxx - Class std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > in this part of the specification. See also the generic specification.

12.1.73 Class istreambuf_iterator<char, char_traits<char> >

12.1.73.1 Interfaces for Class istreambuf_iterator<char, char_traits<char> >

No external methods are defined for libstdcxx - Class std::istreambuf_iterator<char, std::char_traits<char> > in this part of the specification. See also the generic specification.

12.1.74 Class basic_ostream<char, char_traits<char> >

12.1.74.1 Class data for basic_ostream<char, char_traits<char> >

The virtual table for the std::basic_ostream<char, std::char_traits<char> > class is described by Table 12-97

Table 12-97 Primary vtable for basic_ostream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	4
RTTI	typeinfo for basic_ostream<char, char_traits<char> >
vfunc[0]:	basic_ostream<char, char_traits<char> >::~basic_ostream()

vfunc[1]:	basic_ostream<char, char_traits<char> >::~basic_ostream()

Table 12-98 Secondary vtable for basic_ostream<char, char_traits<char> >

Base Offset	-4
Virtual Base Offset	-4
RTTI	typeinfo for basic_ostream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()
vfunc[1]:	virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()

The VTT for the std::basic_ostream<char, std::char_traits<char> > class is described by Table 12-99

Table 12-99 VTT for basic_ostream<char, char_traits<char> >

VTT Name	_ZTTSo
Number of Entries	2

12.1.74.2 Interfaces for Class basic_ostream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ostream<char, std::char_traits<char> > specified in Table 12-100, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-100 libstdcxx - Class basic_ostream<char, char_traits<char> > Function Interfaces

basic_ostream<char, char_traits<char> >::seekp(long long, _Ios_Seekdir)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char> >::write(char const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char> >::_M_write(char const*, int)(GLIBCXX_3.4) [ISOCXX]
virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.75 Class basic_ostream<wchar_t, char_traits<wchar_t> >

12.1.75.1 Class data for basic_ostream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ostream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-101

Table 12-101 Primary vtable for basic_ostream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	4
RTTI	typeinfo for basic_ostream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()
vfunc[1]:	basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()

Table 12-102 Secondary vtable for basic_ostream<wchar_t, char_traits<wchar_t> >

Base Offset	-4
Virtual Base Offset	-4
RTTI	typeinfo for basic_ostream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()
vfunc[1]:	virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()

The VTT for the std::basic_ostream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-103

Table 12-103 VTT for basic_ostream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt13basic_ostreamIwSt11char_traitsIwEE
Number of Entries	2

12.1.75.2 Interfaces for Class basic_ostream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ostream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-104, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-104 libstdcxx - Class basic_ostream<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_ostream<wchar_t, char_traits<wchar_t> >::write(wchar_t const*, int)(GLIBCXX_3.4) [ISOCXX]
virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.76 Class basic_fstream<char, char_traits<char> >

12.1.76.1 Class data for basic_fstream<char, char_traits<char> >

The virtual table for the std::basic_fstream<char, std::char_traits<char> > class is described by Table 12-105

Table 12-105 Primary vtable for basic_fstream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	148
RTTI	typeinfo for basic_fstream<char, char_traits<char> >
vfunc[0]:	basic_fstream<char, char_traits<char> >::~basic_fstream()
vfunc[1]:	basic_fstream<char, char_traits<char> >::~basic_fstream()

Table 12-106 Secondary vtable for basic_fstream<char, char_traits<char> >

Base Offset	-8
Virtual Base Offset	140
RTTI	typeinfo for basic_fstream<char, char_traits<char> >
vfunc[0]:	non-virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()
vfunc[1]:	non-virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()

Table 12-107 Secondary vtable for basic_fstream<char, char_traits<char> >

Base Offset	-148
Virtual Base Offset	-148
RTTI	typeinfo for basic_fstream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()
vfunc[1]:	virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()

The VTT for the std::basic_fstream<char, std::char_traits<char> > class is described by Table 12-108

Table 12-108 VTT for basic_fstream<char, char_traits<char> >

VTT Name	_ZTTSt13basic_fstreamIcSt11char_traitsIcEE
Number of Entries	10

12.1.76.2 Interfaces for Class basic_fstream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_fstream<char, std::char_traits<char> > specified in Table 12-109, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-109 libstdcxx - Class basic_fstream<char, char_traits<char> > Function Interfaces

non-virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_fstream<char, char_traits<char> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.77 Class basic_fstream<wchar_t, char_traits<wchar_t> >

12.1.77.1 Class data for basic_fstream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_fstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-110

Table 12-110 Primary vtable for basic_fstream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	152
RTTI	typeinfo for basic_fstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()
vfunc[1]:	basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()

Table 12-111 Secondary vtable for basic_fstream<wchar_t, char_traits<wchar_t> >

Base Offset	-8
Virtual Base Offset	144
RTTI	typeinfo for basic_fstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	non-virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()
vfunc[1]:	non-virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()

Table 12-112 Secondary vtable for basic_fstream<wchar_t, char_traits<wchar_t> >

Base Offset	-152
Virtual Base Offset	-152
RTTI	typeinfo for basic_fstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()
vfunc[1]:	virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()

The VTT for the std::basic_fstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-113

Table 12-113 VTT for basic_fstream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt13basic_fstreamIwSt11char_traitsIwEE
Number of Entries	10

12.1.77.2 Interfaces for Class basic_fstream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_fstream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-114, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-114 libstdcxx - Class basic_fstream<wchar_t, char_traits<wchar_t> > Function Interfaces

non-virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
non-virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.78 Class basic_ifstream<char, char_traits<char> >

12.1.78.1 Class data for basic_ifstream<char, char_traits<char> >

The virtual table for the std::basic_ifstream<char, std::char_traits<char> > class is described by Table 12-115

Table 12-115 Primary vtable for basic_ifstream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	144
RTTI	typeinfo for basic_ifstream<char, char_traits<char> >
vfunc[0]:	basic_ifstream<char, char_traits<char> >::~basic_ifstream()
vfunc[1]:	basic_ifstream<char, char_traits<char> >::~basic_ifstream()

Table 12-116 Secondary vtable for basic_ifstream<char, char_traits<char> >

Base Offset	-144

Virtual Base Offset	-144
RTTI	typeinfo for basic_ifstream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_ifstream<char, char_traits<char> >::~basic_ifstream()
vfunc[1]:	virtual thunk to basic_ifstream<char, char_traits<char> >::~basic_ifstream()

The VTT for the std::basic_ifstream<char, std::char_traits<char> > class is described by Table 12-117

Table 12-117 VTT for basic_ifstream<char, char_traits<char> >

VTT Name	_ZTTSt14basic_ifstreamIcSt11char_traitsIcEE
Number of Entries	4

12.1.78.2 Interfaces for Class basic_ifstream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ifstream<char, std::char_traits<char> > specified in Table 12-118, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-118 libstdcxx - Class basic_ifstream<char, char_traits<char> > Function Interfaces

virtual thunk to basic_ifstream<char, char_traits<char> >::~basic_ifstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ifstream<char, char_traits<char> >::~basic_ifstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.79 Class basic_ifstream<wchar_t, char_traits<wchar_t> >

12.1.79.1 Class data for basic_ifstream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ifstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-119

Table 12-119 Primary vtable for basic_ifstream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	148
RTTI	typeinfo for basic_ifstream<wchar_t, char_traits<wchar_t> >

vfunc[0]:	basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()
vfunc[1]:	basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()

Table 12-120 Secondary vtable for basic_ifstream<wchar_t, char_traits<wchar_t> >

Base Offset	-148
Virtual Base Offset	-148
RTTI	typeinfo for basic_ifstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()
vfunc[1]:	virtual thunk to basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()

The VTT for the std::basic_ifstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-121

Table 12-121 VTT for basic_ifstream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt14basic_ifstreamIwSt11char_traitsIwEE
Number of Entries	4

12.1.79.2 Interfaces for Class basic_ifstream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ifstream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-122, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-122 libstdcxx - Class basic_ifstream<wchar_t, char_traits<wchar_t> > Function Interfaces

virtual thunk to basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ifstream<wchar_t, char_traits<wchar_t> >::~basic_ifstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.80 Class basic_ofstream<char, char_traits<char> >

12.1.80.1 Class data for basic_ofstream<char, char_traits<char> >

The virtual table for the std::basic_ofstream<char, std::char_traits<char> > class is described by Table 12-123

Table 12-123 Primary vtable for basic_ofstream<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	140
RTTI	typeinfo for basic_ofstream<char, char_traits<char> >
vfunc[0]:	basic_ofstream<char, char_traits<char> >::~basic_ofstream()
vfunc[1]:	basic_ofstream<char, char_traits<char> >::~basic_ofstream()

Table 12-124 Secondary vtable for basic_ofstream<char, char_traits<char> >

Base Offset	-140
Virtual Base Offset	-140
RTTI	typeinfo for basic_ofstream<char, char_traits<char> >
vfunc[0]:	virtual thunk to basic_ofstream<char, char_traits<char> >::~basic_ofstream()
vfunc[1]:	virtual thunk to basic_ofstream<char, char_traits<char> >::~basic_ofstream()

The VTT for the std::basic_ofstream<char, std::char_traits<char> > class is described by Table 12-125

Table 12-125 VTT for basic_ofstream<char, char_traits<char> >

VTT Name	_ZTTSt14basic_ofstreamIcSt11char_traitsIcEE
Number of Entries	4

12.1.80.2 Interfaces for Class basic_ofstream<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ofstream<char, std::char_traits<char> > specified in Table 12-126, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-126 libstdcxx - Class basic_ofstream<char, char_traits<char> > Function Interfaces

virtual thunk to basic_ofstream<char, char_traits<char> >::~basic_ofstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ofstream<char, char_traits<char> >::~basic_ofstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.81 Class basic_ofstream<wchar_t, char_traits<wchar_t> >

12.1.81.1 Class data for basic_ofstream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ofstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-127

Table 12-127 Primary vtable for basic_ofstream<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	144
RTTI	typeinfo for basic_ofstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()
vfunc[1]:	basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()

Table 12-128 Secondary vtable for basic_ofstream<wchar_t, char_traits<wchar_t> >

Base Offset	-144
Virtual Base Offset	-144
RTTI	typeinfo for basic_ofstream<wchar_t, char_traits<wchar_t> >
vfunc[0]:	virtual thunk to basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()
vfunc[1]:	virtual thunk to basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()

The VTT for the std::basic_ofstream<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-129

Table 12-129 VTT for basic_ofstream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt14basic_ofstreamIwSt11char_traitsIwEE
Number of Entries	4

12.1.81.2 Interfaces for Class basic_ofstream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_ofstream<wchar_t, std::char_traits<wchar_t> > specified in Table 12-130, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-130 libstdcxx - Class basic_ofstream<wchar_t, char_traits<wchar_t> > Function Interfaces

virtual thunk to basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()(GLIBCXX_3.4) [CXXABI-1.86]
virtual thunk to basic_ofstream<wchar_t, char_traits<wchar_t> >::~basic_ofstream()(GLIBCXX_3.4) [CXXABI-1.86]

12.1.82 Class basic_streambuf<char, char_traits<char> >

12.1.82.1 Class data for basic_streambuf<char, char_traits<char> >

The virtual table for the std::basic_streambuf<char, std::char_traits<char> > class is described by Table 12-131

Table 12-131 Primary vtable for basic_streambuf<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_streambuf<char, char_traits<char> >
vfunc[0]:	basic_streambuf<char, char_traits<char> >::~basic_streambuf()
vfunc[1]:	basic_streambuf<char, char_traits<char> >::~basic_streambuf()
vfunc[2]:	basic_streambuf<char, char_traits<char> >::imbue(locale const&)
vfunc[3]:	basic_streambuf<char, char_traits<char> >::setbuf(char*, int)
vfunc[4]:	basic_streambuf<char, char_traits<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)

vfunc[5]:	basic_streambuf<char, char_traits<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_streambuf<char, char_traits<char> >::sync()
vfunc[7]:	basic_streambuf<char, char_traits<char> >::showmanyc()
vfunc[8]:	basic_streambuf<char, char_traits<char> >::xsgetn(char*, int)
vfunc[9]:	basic_streambuf<char, char_traits<char> >::underflow()
vfunc[10]:	basic_streambuf<char, char_traits<char> >::uflow()
vfunc[11]:	basic_streambuf<char, char_traits<char> >::pbackfail(int)
vfunc[12]:	basic_streambuf<char, char_traits<char> >::xsputn(char const*, int)
vfunc[13]:	basic_streambuf<char, char_traits<char> >::overflow(int)

The Run Time Type Information for the std::basic_streambuf<char, std::char_traits<char> > class is described by Table 12-132

Table 12-132 typeinfo for basic_streambuf<char, char_traits<char> >

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for basic_streambuf<char, char_traits<char> >

12.1.82.2 Interfaces for Class basic_streambuf<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_streambuf<char, std::char_traits<char> > specified in Table 12-133, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-133 libstdcxx - Class basic_streambuf<char, char_traits<char> > Function Interfaces

basic_streambuf<char, char_traits<char> >::pubseekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sgetn(char*, int)(GLIBCXX_3.4) [ISOCXX]

basic_streambuf<char, char_traits<char> >::sputn(char const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::setbuf(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::xsgetn(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::xsputn(char const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pubsetbuf(char*, int)(GLIBCXX_3.4) [ISOCXX]

12.1.83 Class basic_streambuf<wchar_t, char_traits<wchar_t> >

12.1.83.1 Class data for basic_streambuf<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_streambuf<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-134

Table 12-134 Primary vtable for basic_streambuf<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_streambuf<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::~basic_streambuf()
vfunc[1]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::~basic_streambuf()
vfunc[2]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)
vfunc[3]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, int)
vfunc[4]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	basic_streambuf<wchar_t, char_traits<wchar_t>

	>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::sync()
vfunc[7]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::showmanyc()
vfunc[8]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)
vfunc[9]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::underflow()
vfunc[10]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::uflow()
vfunc[11]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::pbackfail(unsigned int)
vfunc[12]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)
vfunc[13]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::overflow(unsigned int)

The Run Time Type Information for the std::basic_streambuf<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-135

Table 12-135 typeinfo for basic_streambuf<wchar_t, char_traits<wchar_t> >

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for basic_streambuf<wchar_t, char_traits<wchar_t> >

12.1.83.2 Interfaces for Class basic_streambuf<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_streambuf<wchar_t, std::char_traits<wchar_t> > specified in Table 12-136, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-136 libstdcxx - Class basic_streambuf<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_streambuf<wchar_t, char_traits<wchar_t> >::pubseekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]

basic_streambuf<wchar_t, char_traits<wchar_t> >::sgetn(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sputn(wchar_t const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pubsetbuf(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]

12.1.84 Class basic_filebuf<char, char_traits<char> >

12.1.84.1 Class data for basic_filebuf<char, char_traits<char> >

The virtual table for the std::basic_filebuf<char, std::char_traits<char> > class is described by Table 12-137

Table 12-137 Primary vtable for basic_filebuf<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_filebuf<char, char_traits<char> >
vfunc[0]:	basic_filebuf<char, char_traits<char> >::~basic_filebuf()
vfunc[1]:	basic_filebuf<char, char_traits<char> >::~basic_filebuf()
vfunc[2]:	basic_filebuf<char, char_traits<char> >::imbue(locale const&)
vfunc[3]:	basic_filebuf<char, char_traits<char> >::setbuf(char*, int)
vfunc[4]:	basic_filebuf<char, char_traits<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	basic_filebuf<char, char_traits<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_filebuf<char, char_traits<char> >::sync()

vfunc[7]:	basic_filebuf<char, char_traits<char> >::showmanyc()
vfunc[8]:	basic_filebuf<char, char_traits<char> >::xsgetn(char*, int)
vfunc[9]:	basic_filebuf<char, char_traits<char> >::underflow()
vfunc[10]:	basic_streambuf<char, char_traits<char> >::uflow()
vfunc[11]:	basic_filebuf<char, char_traits<char> >::pbackfail(int)
vfunc[12]:	basic_filebuf<char, char_traits<char> >::xsputn(char const*, int)
vfunc[13]:	basic_filebuf<char, char_traits<char> >::overflow(int)

The Run Time Type Information for the std::basic_filebuf<char, std::char_traits<char> > class is described by Table 12-138

Table 12-138 typeinfo for basic_filebuf<char, char_traits<char> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for basic_filebuf<char, char_traits<char> >

12.1.84.2 Interfaces for Class basic_filebuf<char, char_traits<char> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_filebuf<char, std::char_traits<char> > specified in Table 12-139, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-139 libstdcxx - Class basic_filebuf<char, char_traits<char> > Function Interfaces

basic_filebuf<char, char_traits<char> >::_M_set_buffer(int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char> >::_M_convert_to_external(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char> >::setbuf(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char> >::xsgetn(char*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char> >::xsputn(char const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char> >::_M_seek(long long, _Ios_Seekdir, __mbstate_t)(GLIBCXX_3.4) [ISOCXX]

basic_filebuf<char, char_traits<char> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]

12.1.85 Class basic_filebuf<wchar_t, char_traits<wchar_t> >

12.1.85.1 Class data for basic_filebuf<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_filebuf<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-140

Table 12-140 Primary vtable for basic_filebuf<wchar_t, char_traits<wchar_t>>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_filebuf<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::~basic_filebuf()
vfunc[1]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::~basic_filebuf()
vfunc[2]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)
vfunc[3]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, int)
vfunc[4]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)
vfunc[5]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::sync()
vfunc[7]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::showmanyc()
vfunc[8]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)
vfunc[9]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::underflow()

vfunc[10]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::uflow()
vfunc[11]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::pbackfail(unsigned int)
vfunc[12]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)
vfunc[13]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::overflow(unsigned int)

The Run Time Type Information for the std::basic_filebuf<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-141

Table 12-141 typeinfo for basic_filebuf<wchar_t, char_traits<wchar_t> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for basic_filebuf<wchar_t, char_traits<wchar_t> >

12.1.85.2 Interfaces for Class basic_filebuf<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the architecture specific methods for Class std::basic_filebuf<wchar_t, std::char_traits<wchar_t> > specified in Table 12-142, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-142 libstdcxx - Class basic_filebuf<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_set_buffer(int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_convert_to_external(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_seek(long long, _Ios_Seekdir, __mbstate_t)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t> >::seekoff(long long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]

basic_istream<wchar_t, char_traits<wchar_t> >::seekg(long long, _Ios_Seekdir)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t> >::seekp(long long, _Ios_Seekdir)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t> >::_M_write(wchar_t const*, int)(GLIBCXX_3.4) [ISOCXX]

12.1.86 Class ios_base

12.1.86.1 Class data for ios_base

The virtual table for the std::ios_base class is described in the generic part of this specification.

The Run Time Type Information for the std::ios_base class is described by Table 12-143

Table 12-143 typeinfo for ios_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for ios_base

12.1.86.2 Interfaces for Class ios_base

No external methods are defined for libstdcxx - Class std::ios_base in this part of the specification. See also the generic specification.

12.1.87 Class basic_ios<char, char_traits<char> >

12.1.87.1 Class data for basic_ios<char, char_traits<char> >

The virtual table for the std::basic_ios<char, std::char_traits<char> > class is described in the generic part of this specification.

12.1.87.2 Interfaces for Class basic_ios<char, char_traits<char> >

No external methods are defined for libstdcxx - Class std::basic_ios<char, std::char_traits<char> > in this part of the specification. See also the generic specification.

12.1.88 Class basic_ios<wchar_t, char_traits<wchar_t> >

12.1.88.1 Class data for basic_ios<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ios<wchar_t, std::char_traits<wchar_t> > class is described in the generic part of this specification.

The Run Time Type Information for the std::basic_ios<wchar_t, std::char_traits<wchar_t> > class is described by Table 12-144

Table 12-144 typeinfo for basic_ios<wchar_t, char_traits<wchar_t> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info	
Name	typeinfo name for basic_ios<wchar_t, char_traits<wchar_t> >	
flags:	8	
basetype:	typeinfo for ios_base	1026

12.1.88.2 Interfaces for Class basic_ios<wchar_t, char_traits<wchar_t> >

No external methods are defined for libstdcxx - Class std::basic_ios<wchar_t, std::char_traits<wchar_t> > in this part of the specification. See also the generic specification.

12.1.89 Class ios_base::failure

12.1.89.1 Class data for ios_base::failure

The virtual table for the std::ios_base::failure class is described in the generic part of this specification.

The Run Time Type Information for the std::ios_base::failure class is described by Table 12-145

Table 12-145 typeinfo for ios_base::failure

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for ios_base::failure

12.1.89.2 Interfaces for Class ios_base::failure

No external methods are defined for libstdcxx - Class std::ios_base::failure in this part of the specification. See also the generic specification.

12.1.90 Class __timepunct<char>

12.1.90.1 Class data for __timepunct<char>

The virtual table for the std::__timepunct<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::__timepunct<char> class is described by Table 12-146

Table 12-146 typeinfo for __timepunct<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __timepunct<char>

12.1.90.2 Interfaces for Class __timepunct<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::__timepunct<char> specified in Table 12-147, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-147 libstdcxx - Class __timepunct<char> Function Interfaces

__timepunct<char>::_M_put(char*, unsigned int, char const*, tm const*) const(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(__timepunct_cache<char>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(__timepunct_cache<char>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char>::__timepunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.91 Class __timepunct<wchar_t>

12.1.91.1 Class data for __timepunct<wchar_t>

The virtual table for the std::__timepunct<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::__timepunct<wchar_t> class is described by Table 12-148

Table 12-148 typeinfo for __timepunct<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __timepunct<wchar_t>

12.1.91.2 Interfaces for Class __timepunct<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::__timepunct<wchar_t> specified in Table 12-149, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-149 libstdcxx - Class __timepunct<wchar_t> Function Interfaces

__timepunct<wchar_t>::_M_put(wchar_t*, unsigned int, wchar_t const*, tm const*) const(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t>::__timepunct(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

__timepunct<wchar_t>::__timepunct(__timepunct_cache<wchar_t>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t>::__timepunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t>::__timepunct(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t>::__timepunct(__timepunct_cache<wchar_t>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t>::__timepunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.92 Class messages_base

12.1.92.1 Class data for messages_base

The Run Time Type Information for the std::messages_base class is described by Table 12-150

Table 12-150 typeinfo for messages_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for messages_base

12.1.92.2 Interfaces for Class messages_base

No external methods are defined for libstdcxx - Class std::messages_base in this part of the specification. See also the generic specification.

12.1.93 Class messages<char>

12.1.93.1 Class data for messages<char>

The virtual table for the std::messages<char> class is described in the generic part of this specification.

12.1.93.2 Interfaces for Class messages<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::messages<char> specified in Table 12-151, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-151 libstdcxx - Class messages<char> Function Interfaces

messages<char>::messages(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<char>::messages(unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<char>::messages(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<char>::messages(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.94 Class messages<wchar_t>

12.1.94.1 Class data for messages<wchar_t>

The virtual table for the std::messages<wchar_t> class is described in the generic part of this specification.

12.1.94.2 Interfaces for Class messages<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::messages<wchar_t> specified in Table 12-152, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-152 libstdcxx - Class messages<wchar_t> Function Interfaces

messages<wchar_t>::messages(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::messages(unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::messages(__locale_struct*, char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::messages(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.95 Class messages_byname<char>

12.1.95.1 Class data for messages_byname<char>

The virtual table for the std::messages_byname<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::messages_byname<char> class is described by Table 12-153

Table 12-153 typeinfo for messages_byname<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for messages_byname<char>

12.1.95.2 Interfaces for Class messages_byname<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::messages_byname<char> specified in Table 12-154, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-154 libstdcxx - Class messages_byname<char> Function Interfaces

messages_byname<char>::messages_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages_byname<char>::messages_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.96 Class messages_byname<wchar_t>

12.1.96.1 Class data for messages_byname<wchar_t>

The virtual table for the std::messages_byname<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::messages_byname<wchar_t> class is described by Table 12-155

Table 12-155 typeinfo for messages_byname<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for messages_byname<wchar_t>

12.1.96.2 Interfaces for Class messages_byname<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::messages_byname<wchar_t> specified in Table 12-156, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-156 libstdcxx - Class messages_byname<wchar_t> Function Interfaces

messages_byname<wchar_t>::messages_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
messages_byname<wchar_t>::messages_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.97 Class numpunct<char>

12.1.97.1 Class data for numpunct<char>

The virtual table for the std::numpunct<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::numpunct<char> class is described by Table 12-157

Table 12-157 typeinfo for numpunct<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for numpunct<char>

12.1.97.2 Interfaces for Class numpunct<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::numpunct<char> specified in Table 12-158, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-158 libstdcxx - Class numpunct<char> Function Interfaces

numpunct<char>::numpunct(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

numpunct<char>::numpunct(__numpunct_cache<char>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::numpunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::numpunct(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::numpunct(__numpunct_cache<char>*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::numpunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.98 Class numpunct<wchar_t>

12.1.98.1 Class data for numpunct<wchar_t>

The virtual table for the std::numpunct<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::numpunct<wchar_t> class is described by Table 12-159

Table 12-159 typeinfo for numpunct<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for numpunct<wchar_t>

12.1.98.2 Interfaces for Class numpunct<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::numpunct<wchar_t> specified in Table 12-160, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-160 libstdcxx - Class numpunct<wchar_t> Function Interfaces

numpunct<wchar_t>::numpunct(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::numpunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::numpunct(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::numpunct(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.99 Class numpunct_byname<char>

12.1.99.1 Class data for numpunct_byname<char>

The virtual table for the std::numpunct_byname<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::numpunct_byname<char> class is described by Table 12-161

Table 12-161 typeinfo for numpunct_byname<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for numpunct_byname<char>

12.1.99.2 Interfaces for Class numpunct_byname<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::numpunct_byname<char> specified in Table 12-162, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-162 libstdcxx - Class numpunct_byname<char> Function Interfaces

numpunct_byname<char>::numpunct_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct_byname<char>::numpunct_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.100 Class numpunct_byname<wchar_t>

12.1.100.1 Class data for numpunct_byname<wchar_t>

The virtual table for the std::numpunct_byname<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::numpunct_byname<wchar_t> class is described by Table 12-163

Table 12-163 typeinfo for numpunct_byname<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for numpunct_byname<wchar_t>

12.1.100.2 Interfaces for Class numpunct_byname<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::numpunct_byname<wchar_t> specified in Table 12-164, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-164 libstdcxx - Class numpunct_byname<wchar_t> Function Interfaces

numpunct_byname<wchar_t>::numpunct_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
numpunct_byname<wchar_t>::numpunct_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.101 Class __codecvt_abstract_base<char, char, __mbstate_t>

12.1.101.1 Class data for __codecvt_abstract_base<char, char, __mbstate_t>

The virtual table for the std::__codecvt_abstract_base<char, char, __mbstate_t> class is described in the generic part of this specification.

12.1.101.2 Interfaces for Class __codecvt_abstract_base<char, char, __mbstate_t>

No external methods are defined for libstdcxx - Class std::__codecvt_abstract_base<char, char, __mbstate_t> in this part of the specification. See also the generic specification.

12.1.102 Class __codecvt_abstract_base<wchar_t, char, __mbstate_t>

12.1.102.1 Class data for __codecvt_abstract_base<wchar_t, char, __mbstate_t>

The virtual table for the std::__codecvt_abstract_base<wchar_t, char, __mbstate_t> class is described in the generic part of this specification.

12.1.102.2 Interfaces for Class __codecvt_abstract_base<wchar_t, char, __mbstate_t>

No external methods are defined for libstdcxx - Class std::__codecvt_abstract_base<wchar_t, char, __mbstate_t> in this part of the specification. See also the generic specification.

12.1.103 Class codecvt_base

12.1.103.1 Class data for codecvt_base

The Run Time Type Information for the std::codecvt_base class is described by Table 12-165

Table 12-165 typeinfo for codecvt_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for codecvt_base

12.1.103.2 Interfaces for Class codecvt_base

No external methods are defined for libstdcxx - Class std::codecvt_base in this part of the specification. See also the generic specification.

12.1.104 Class codecvt<char, char, __mbstate_t>

12.1.104.1 Class data for codecvt<char, char, __mbstate_t>

The virtual table for the std::codecvt<char, char, __mbstate_t> class is described by Table 12-166

Table 12-166 Primary vtable for codecvt<char, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt<char, char, __mbstate_t>
vfunc[0]:	codecvt<char, char, __mbstate_t>::~codecvt()
vfunc[1]:	codecvt<char, char, __mbstate_t>::~codecvt()
vfunc[2]:	codecvt<char, char, __mbstate_t>::do_out(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[3]:	codecvt<char, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<char, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[5]:	codecvt<char, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<char, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	codecvt<char, char, __mbstate_t>::do_length(__mbstate_t&, char const*, char const*, unsigned int) const
vfunc[8]:	codecvt<char, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt<char, char, __mbstate_t> class is described by Table 12-167

Table 12-167 typeinfo for codecvt<char, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for codecvt<char, char, __mbstate_t>

12.1.104.2 Interfaces for Class codecvt<char, char, __mbstate_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::codecvt<char, char, __mbstate_t> specified in Table 12-168,

with the full mandatory functionality as described in the referenced underlying specification.

Table 12-168 libstdcxx - Class codecvt<char, char, __mbstate_t> Function Interfaces

codecvt<char, char, __mbstate_t>::do_length(__mbstate_t&, char const*, char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::codecvt(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::codecvt(unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::codecvt(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::codecvt(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.105 Class codecvt<wchar_t, char, __mbstate_t>

12.1.105.1 Class data for codecvt<wchar_t, char, __mbstate_t>

The virtual table for the std::codecvt<wchar_t, char, __mbstate_t> class is described by Table 12-169

Table 12-169 Primary vtable for codecvt<wchar_t, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt<wchar_t, char, __mbstate_t>
vfunc[0]:	codecvt<wchar_t, char, __mbstate_t>::~codecvt()
vfunc[1]:	codecvt<wchar_t, char, __mbstate_t>::~codecvt()
vfunc[2]:	codecvt<wchar_t, char, __mbstate_t>::do_out(__mbstate_t&, wchar_t const*, wchar_t const*, wchar_t const*&, char*, char*, char*&) const
vfunc[3]:	codecvt<wchar_t, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<wchar_t, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, wchar_t*, wchar_t*, wchar_t*&) const

vfunc[5]:	codecvt<wchar_t, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<wchar_t, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	codecvt<wchar_t, char, __mbstate_t>::do_length(__mbstate_t &, char const*, char const*, unsigned int) const
vfunc[8]:	codecvt<wchar_t, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt<wchar_t, char, __mbstate_t> class is described by Table 12-170

Table 12-170 typeinfo for codecvt<wchar_t, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for codecvt<wchar_t, char, __mbstate_t>

12.1.105.2 Interfaces for Class codecvt<wchar_t, char, __mbstate_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::codecvt<wchar_t, char, __mbstate_t> specified in Table 12-171, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-171 libstdcxx - Class codecvt<wchar_t, char, __mbstate_t> Function Interfaces

codecvt<wchar_t, char, __mbstate_t>::do_length(__mbstate_t&, char const*, char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::codecvt(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::codecvt(unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::codecvt(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::codecvt(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.106 Class codecvt_byname<char, char, __mbstate_t>

12.1.106.1 Class data for codecvt_byname<char, char, __mbstate_t>

The virtual table for the std::codecvt_byname<char, char, __mbstate_t> class is described by Table 12-172

Table 12-172 Primary vtable for codecvt_byname<char, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt_byname<char, char, __mbstate_t>
vfunc[0]:	codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()
vfunc[1]:	codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()
vfunc[2]:	codecvt<char, char, __mbstate_t>::do_out(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[3]:	codecvt<char, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<char, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[5]:	codecvt<char, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<char, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	codecvt<char, char, __mbstate_t>::do_length(__mbstate_t&, char const*, char const*, unsigned int) const
vfunc[8]:	codecvt<char, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt_byname<char, char, __mbstate_t> class is described by Table 12-173

Table 12-173 typeinfo for codecvt_byname<char, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info

Name	typeinfo name for codecvt_byname<char, char, __mbstate_t>

12.1.106.2 Interfaces for Class codecvt_byname<char, char, __mbstate_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::codecvt_byname<char, char, __mbstate_t> specified in Table 12-174, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-174 libstdcxx - Class codecvt_byname<char, char, __mbstate_t> Function Interfaces

codecvt_byname<char, char, __mbstate_t>::codecvt_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt_byname<char, char, __mbstate_t>::codecvt_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.107 Class codecvt_byname<wchar_t, char, __mbstate_t>

12.1.107.1 Class data for codecvt_byname<wchar_t, char, __mbstate_t>

The virtual table for the std::codecvt_byname<wchar_t, char, __mbstate_t> class is described by Table 12-175

Table 12-175 Primary vtable for codecvt_byname<wchar_t, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt_byname<wchar_t, char, __mbstate_t>
vfunc[0]:	codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname()
vfunc[1]:	codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname()
vfunc[2]:	codecvt<wchar_t, char, __mbstate_t>::do_out(__mbstate_t&, wchar_t const*, wchar_t const*, wchar_t const*&, char*, char*, char*&) const
vfunc[3]:	codecvt<wchar_t, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<wchar_t, char, __mbstate_t>::do_in(__mbstate_t&,

	char const*, char const*, char const*&, wchar_t*, wchar_t*, wchar_t*&) const
vfunc[5]:	codecvt<wchar_t, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<wchar_t, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	codecvt<wchar_t, char, __mbstate_t>::do_length(__mbstate_t &, char const*, char const*, unsigned int) const
vfunc[8]:	codecvt<wchar_t, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt_byname<wchar_t, char, __mbstate_t> class is described by Table 12-176

Table 12-176 typeinfo for codecvt_byname<wchar_t, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for codecvt_byname<wchar_t, char, __mbstate_t>

12.1.107.2 Interfaces for Class codecvt_byname<wchar_t, char, __mbstate_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::codecvt_byname<wchar_t, char, __mbstate_t> specified in Table 12-177, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-177 libstdcxx - Class codecvt_byname<wchar_t, char, __mbstate_t> Function Interfaces

codecvt_byname<wchar_t, char, __mbstate_t>::codecvt_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
codecvt_byname<wchar_t, char, __mbstate_t>::codecvt_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.108 Class collate<char>

12.1.108.1 Class data for collate<char>

The virtual table for the std::collate<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::collate<char> class is described by Table 12-178

Table 12-178 typeinfo for collate<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for collate<char>

12.1.108.2 Interfaces for Class collate<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::collate<char> specified in Table 12-179, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-179 libstdcxx - Class collate<char> Function Interfaces

collate<char>::_M_transform(char*, char const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
collate<char>::collate(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate<char>::collate(unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate<char>::collate(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate<char>::collate(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.109 Class collate<wchar_t>

12.1.109.1 Class data for collate<wchar_t>

The virtual table for the std::collate<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::collate<wchar_t> class is described by Table 12-180

Table 12-180 typeinfo for collate<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for collate<wchar_t>

12.1.109.2 Interfaces for Class collate<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::collate<wchar_t> specified in Table 12-181, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-181 libstdcxx - Class collate<wchar_t> Function Interfaces

collate<wchar_t>::_M_transform(wchar_t*, wchar_t const*, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::collate(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::collate(unsigned int)(GLIBCXX_3.4) [ISOCXX]

collate<wchar_t>::collate(__locale_struct*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::collate(unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.110 Class collate_byname<char>

12.1.110.1 Class data for collate_byname<char>

The virtual table for the std::collate_byname<char> class is described in the generic part of this specification.

The Run Time Type Information for the std::collate_byname<char> class is described by Table 12-182

Table 12-182 typeinfo for collate_byname<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for collate_byname<char>

12.1.110.2 Interfaces for Class collate_byname<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::collate_byname<char> specified in Table 12-183, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-183 libstdcxx - Class collate_byname<char> Function Interfaces

collate_byname<char>::collate_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate_byname<char>::collate_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.111 Class collate_byname<wchar_t>

12.1.111.1 Class data for collate_byname<wchar_t>

The virtual table for the std::collate_byname<wchar_t> class is described in the generic part of this specification.

The Run Time Type Information for the std::collate_byname<wchar_t> class is described by Table 12-184

Table 12-184 typeinfo for collate_byname<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for collate_byname<wchar_t>

12.1.111.2 Interfaces for Class collate_byname<wchar_t>

An LSB conforming implementation shall provide the architecture specific methods for Class std::collate_byname<wchar_t> specified in Table 12-185, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-185 libstdcxx - Class collate_byname<wchar_t> Function Interfaces

collate_byname<wchar_t>::collate_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
collate_byname<wchar_t>::collate_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.112 Class time_base

12.1.112.1 Class data for time_base

The Run Time Type Information for the std::time_base class is described by Table 12-186

Table 12-186 typeinfo for time_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for time_base

12.1.112.2 Interfaces for Class time_base

No external methods are defined for libstdcxx - Class std::time_base in this part of the specification. See also the generic specification.

12.1.113 Class time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >

12.1.113.1 Class data for time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >

The virtual table for the std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> > > class is described in the generic part of this specification.

The Run Time Type Information for the std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> > > class is described by Table 12-187

Table 12-187 typeinfo for time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >

12.1.113.2 Interfaces for Class time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> > > specified in Table 12-188, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-188 libstdcxx - Class time_get_byname<char, istreambuf_iterator<char, char_traits<char> > > Function Interfaces

time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >::time_get_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >::time_get_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.114 Class time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >

12.1.114.1 Class data for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >

The virtual table for the std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > class is described in the generic part of this specification.

The Run Time Type Information for the std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > class is described by Table 12-189

Table 12-189 typeinfo for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >

12.1.114.2 Interfaces for Class time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > specified in Table 12-190, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-190 libstdcxx - Class time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > > Function Interfaces

time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::time_get_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::time_get_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.115 Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

12.1.115.1 Class data for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

The virtual table for the std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > class is described in the generic part of this specification.

The Run Time Type Information for the std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > class is described by Table 12-191

Table 12-191 typeinfo for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

12.1.115.2 Interfaces for Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > specified in Table 12-192, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-192 libstdcxx - Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > > Function Interfaces

time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::time_put_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::time_put_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.116 Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

12.1.116.1 Class data for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

The virtual table for the std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > class is described in the generic part of this specification.

The Run Time Type Information for the std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > class is described by Table 12-193

Table 12-193 typeinfo for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

12.1.116.2 Interfaces for Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > specified in Table 12-194, with the full mandatory functionality as described in the referenced underlying specification.

Table 12-194 libstdcxx - Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > > Function Interfaces

time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::time_put_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]
time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::time_put_byname(char const*, unsigned int)(GLIBCXX_3.4) [ISOCXX]

12.1.117 Class time_get<char, istreambuf_iterator<char, char_traits<char> > >

12.1.117.1 Class data for time_get<char, istreambuf_iterator<char, char_traits<char> > >

The virtual table for the std::time_get<char, std::istreambuf_iterator<char, std::char_traits<char> > > class is described in the generic part of this specification.

12.1.117.2 Interfaces for Class time_get<char, istreambuf_iterator<char, char_traits<char> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::time_get<char, std::istreambuf_iterator<char, std::char_traits<char> > > specified in Table 12-195, with the full mandatory functionality as described in the referenced underlying specification.