

# **Linux Standard Base C++ Specification for AMD64 3.0**

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## Foreword

This is version 3.0 of the Linux Standard Base C++ Specification for AMD64. This specification is part of a family of specifications under the general title "Linux Standard Base". Developers of applications or implementations interested in using the LSB trademark should see the Free Standards Group Certification Policy for details.

## Introduction

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

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:

- The first number ( $x$ ) is the major version number. All versions with the same major version number should share binary compatibility. Any addition or deletion of a new library results in a new version number. Interfaces marked as `deprecated` may be removed from the specification at a major version change.
- The second number ( $y$ ) is the minor version number. Individual interfaces may be added if all certified implementations already had that (previously undocumented) interface. Interfaces may be marked as `deprecated` at a minor version change. Other minor changes may be permitted at the discretion of the LSB workgroup.
- The third number ( $z$ ), if present, is the editorial level. Only editorial changes should be included in such versions.

# 1 Scope

## 1.1 General

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

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

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

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

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

## 1.2 Module Specific Scope

This is the C++ module of the Linux Standards Base (LSB). This module supplements the core interfaces by providing system interfaces, libraries, and a runtime environment for applications built using the C++ programming language. These interfaces provide low-level support for the core constructs of the language, and implement the standard base C++ libraries.

Interfaces described in this module are presented in terms of C++; the binary interfaces will use encoded or mangled versions of the names.

## 2 Normative References

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

**Table 2-1 Normative References**

Name	Title	URL
ISO POSIX (2003)	ISO/IEC 9945-1:2003 Information technology - - Portable Operating System Interface (POSIX) -- Part 1: Base Definitions  ISO/IEC 9945-2:2003 Information technology - - Portable Operating System Interface (POSIX) -- Part 2: System Interfaces  ISO/IEC 9945-3:2003 Information technology - - Portable Operating System Interface (POSIX) -- Part 3: Shell and Utilities  ISO/IEC 9945-4:2003 Information technology - - Portable Operating System Interface (POSIX) -- Part 4: Rationale  Including Technical Cor. 1: 2004	<a href="http://www.unix.org/version3/">http://www.unix.org/ version3/</a>
ISO/IEC 14882: 2003 C++ Language	ISO/IEC 14882: 2003 Programming languages --C++	
Itanium C++ ABI	Itanium C++ ABI (Revision: 1.75)	<a href="http://www.codesourcery.com/cxx-abi/abi.html">http://www.codesour cery.com/cxx-abi/abi.html</a>
this specification	Linux Standard Base	<a href="http://www.linuxbase.org/spec/">http://www.linuxbase.o rg/spec/</a>

## 3 Requirements

### 3.1 Relevant Libraries

The libraries listed in Table 3-1 shall be available on a Linux Standard Base system, with the specified runtime names.

**Table 3-1 Standard Library Names**

Library	Runtime Name
libstdcxx	libstdc++.so.6

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

### 3.2 LSB Implementation Conformance

An implementation shall satisfy the following requirements:

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

- The implementation may provide additional interfaces with different names. It may also provide additional behavior corresponding to data values outside the standard ranges, for standard named interfaces.

### 3.3 LSB Application Conformance

An application shall satisfy the following requirements:

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

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



## 4 Definitions

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

can

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

cannot

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

may

is permitted; is allowed; is permissible

need not

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

shall

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

shall not

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

should

it is recommended that; ought to

should not

it is not recommended that; ought not to

## 5 Terminology

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

### archLSB

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

### Binary Standard

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

### gLSB

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

### implementation-defined

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

### Shell Script

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

### Source Standard

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

### undefined

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

### unspecified

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

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

## 6 Documentation Conventions

Throughout this document, the following typographic conventions are used:

`function()`

the name of a function

**command**

the name of a command or utility

`CONSTANT`

a constant value

*parameter*

a parameter

`variable`

a variable

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

name

the name of the interface

(symver)

An optional symbol version identifier, if required.

[*refno*]

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

For example,

<code>forkpty(GLIBC_2.0) [1]</code>
-------------------------------------

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

## 7 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 AMD64 platform are defined here. This section should be used in conjunction with the corresponding section in the Linux Standard Base Specification.

### 7.1 Interfaces for libstdcxx

Table 7-1 defines the library name and shared object name for the libstdcxx library

**Table 7-1 libstdcxx Definition**

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

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

Itanium C++ ABI  
ISO/IEC 14882: 2003 C++ Language  
this specification

#### 7.1.1 C++ Runtime Support

##### 7.1.1.1 Interfaces for C++ Runtime Support

An LSB conforming implementation shall provide the architecture specific methods for C++ Runtime Support specified in Table 7-2, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-2 libstdcxx - C++ Runtime Support Function Interfaces**

operator new[](unsigned long)(GLIBCXX_3.4) [1]
operator new[](unsigned long, nothrow_t const&)(GLIBCXX_3.4) [1]
operator new(unsigned long)(GLIBCXX_3.4) [1]
operator new(unsigned long, nothrow_t const&)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

#### 7.1.2 C++ type descriptors for built-in types

##### 7.1.2.1 Interfaces for C++ type descriptors for built-in types

No external methods are defined for libstdcxx - C++ type descriptors for built-in types

### 7.1.3 C++ `_Rb_tree`

#### 7.1.3.1 Interfaces for C++ `_Rb_tree`

No external methods are defined for `libstdc++ - C++ _Rb_tree`

### 7.1.4 Class `type_info`

#### 7.1.4.1 Class data for `type_info`

The virtual table for the `std::type_info` class is described by Table 7-3

**Table 7-3 Primary vtable for `type_info`**

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

The Run Time Type Information for the `std::type_info` class is described by Table 7-4

**Table 7-4 typeinfo for `type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	typeinfo name for <code>type_info</code>

#### 7.1.4.2 Interfaces for Class `type_info`

No external methods are defined for `libstdc++ - Class std::type_info`

### 7.1.5 Class `__cxxabiv1::__enum_type_info`

#### 7.1.5.1 Class data for `__cxxabiv1::__enum_type_info`

The virtual table for the `__cxxabiv1::__enum_type_info` class is described by Table 7-5

**Table 7-5 Primary vtable for `__cxxabiv1::__enum_type_info`**

Base Offset	0
Virtual Base Offset	0

RTTI	typeinfo for __cxxabiv1::__enum_type_info
vfunc[0]:	__cxxabiv1::__enum_type_info::~~enum_type_info()
vfunc[1]:	__cxxabiv1::__enum_type_info::~~enum_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const

The Run Time Type Information for the \_\_cxxabiv1::\_\_enum\_type\_info class is described by Table 7-6

**Table 7-6 typeinfo for \_\_cxxabiv1::\_\_enum\_type\_info**

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

### 7.1.5.2 Interfaces for Class \_\_cxxabiv1::\_\_enum\_type\_info

No external methods are defined for libstdc++ - Class

\_\_cxxabiv1::\_\_enum\_type\_info

### 7.1.6 Class \_\_cxxabiv1::\_\_array\_type\_info

#### 7.1.6.1 Class data for \_\_cxxabiv1::\_\_array\_type\_info

The virtual table for the \_\_cxxabiv1::\_\_array\_type\_info class is described by Table 7-7

**Table 7-7 Primary vtable for \_\_cxxabiv1::\_\_array\_type\_info**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__array_type_info
vfunc[0]:	__cxxabiv1::__array_type_info::~~array_type_info()
vfunc[1]:	__cxxabiv1::__array_type_info::~~array_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const

vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const

The Run Time Type Information for the `__cxxabiv1::__array_type_info` class is described by Table 7-8

**Table 7-8 typeid for `__cxxabiv1::__array_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>__cxxabiv1::__array_type_info</code>

### 7.1.6.2 Interfaces for Class `__cxxabiv1::__array_type_info`

No external methods are defined for libstdc++ - Class `__cxxabiv1::__array_type_info`

### 7.1.7 Class `__cxxabiv1::__class_type_info`

#### 7.1.7.1 Class data for `__cxxabiv1::__class_type_info`

The virtual table for the `__cxxabiv1::__class_type_info` class is described by Table 7-9

**Table 7-9 Primary vtable for `__cxxabiv1::__class_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>__cxxabiv1::__class_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__class_type_info::~~__class_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__class_type_info::~~__class_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcas</code>



	t_result&) const
vfunc[7]:	__cxxabiv1::__class_type_info::__do_dyn ycast(long, __cxxabiv1::__class_type_info::__sub_k ind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynca st_result&) const
vfunc[8]:	__cxxabiv1::__class_type_info::__do_fi nd_public_src(long, 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 7-10

**Table 7-10 typeinfo for `__cxxabiv1::__class_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__class_type_info</code>

### 7.1.7.2 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 7-11, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-11 libstdc++ - Class `__cxxabiv1::__class_type_info` Function Interfaces**

<code>__cxxabiv1::__class_type_info::__do_dyn ycast(long, __cxxabiv1::__class_type_info::__sub_k ind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynca st_result&amp;) const(CXXABI_1.3) [1]</code>
<code>__cxxabiv1::__class_type_info::__do_fi nd_public_src(long, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [1]</code>

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.8 Class `__cxxabiv1::__pbase_type_info`

#### 7.1.8.1 Class data for `__cxxabiv1::__pbase_type_info`

The virtual table for the `__cxxabiv1::__pbase_type_info` class is described by Table 7-12

**Table 7-12 Primary vtable for `__cxxabiv1::__pbase_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__pbase_type_info</code>
<code>vfunc[0]:</code>	<code>__cxxabiv1::__pbase_type_info::~__pbase_type_info()</code>
<code>vfunc[1]:</code>	<code>__cxxabiv1::__pbase_type_info::~__pbase_type_info()</code>
<code>vfunc[2]:</code>	<code>type_info::__is_pointer_p() const</code>
<code>vfunc[3]:</code>	<code>type_info::__is_function_p() const</code>
<code>vfunc[4]:</code>	<code>__cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
<code>vfunc[5]:</code>	<code>type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
<code>vfunc[6]:</code>	<code>__cxxabiv1::__pbase_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code>

The Run Time Type Information for the `__cxxabiv1::__pbase_type_info` class is described by Table 7-13

**Table 7-13 typeinfo for `__cxxabiv1::__pbase_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__pbase_type_info</code>

### 7.1.8.2 Interfaces for Class `__cxxabiv1::__pbase_type_info`

No external methods are defined for libstdc++ - Class  
`__cxxabiv1::__pbase_type_info`

### 7.1.9 Class `__cxxabiv1::__pointer_type_info`

#### 7.1.9.1 Class data for `__cxxabiv1::__pointer_type_info`

The virtual table for the `__cxxabiv1::__pointer_type_info` class is described by Table 7-14

**Table 7-14 Primary vtable for `__cxxabiv1::__pointer_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for

	<code>__cxxabiv1::__pointer_type_info</code>
<code>vfunc[0]:</code>	<code>__cxxabiv1::__pointer_type_info::~~_p ointer_type_info()</code>
<code>vfunc[1]:</code>	<code>__cxxabiv1::__pointer_type_info::~~_p ointer_type_info()</code>
<code>vfunc[2]:</code>	<code>__cxxabiv1::__pointer_type_info::__is_ pointer_p() const</code>
<code>vfunc[3]:</code>	<code>type_info::__is_function_p() const</code>
<code>vfunc[4]:</code>	<code>__cxxabiv1::__pbase_type_info::__do_c atch(type_info const*, void**, unsigned int) const</code>
<code>vfunc[5]:</code>	<code>type_info::__do_upcast(__cxxabiv1::__c lass_type_info const*, void**) const</code>
<code>vfunc[6]:</code>	<code>__cxxabiv1::__pointer_type_info::__poi nter_catch(__cxxabiv1::__pbase_type_i nfo const*, void**, unsigned int) const</code>

The Run Time Type Information for the `__cxxabiv1::__pointer_type_info` class is described by Table 7-15

**Table 7-15 typeinfo for `__cxxabiv1::__pointer_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__pointer_type_info</code>

### 7.1.9.2 Interfaces for Class `__cxxabiv1::__pointer_type_info`

No external methods are defined for libstdc++ - Class  
`__cxxabiv1::__pointer_type_info`

### 7.1.10 Class `__cxxabiv1::__function_type_info`

#### 7.1.10.1 Class data for `__cxxabiv1::__function_type_info`

The virtual table for the `__cxxabiv1::__function_type_info` class is described by Table 7-16

**Table 7-16 Primary vtable for `__cxxabiv1::__function_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__function_type_info</code>
<code>vfunc[0]:</code>	<code>__cxxabiv1::__function_type_info::~~_f unction_type_info()</code>
<code>vfunc[1]:</code>	<code>__cxxabiv1::__function_type_info::~~_f</code>

	unction_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	__cxxabiv1::__function_type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const

The Run Time Type Information for the `__cxxabiv1::__function_type_info` class is described by Table 7-17

**Table 7-17 typeinfo for `__cxxabiv1::__function_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__function_type_info</code>

#### 7.1.10.2 Interfaces for Class `__cxxabiv1::__function_type_info`

No external methods are defined for libstdc++ - Class  
`__cxxabiv1::__function_type_info`

#### 7.1.11 Class `__cxxabiv1::__si_class_type_info`

##### 7.1.11.1 Class data for `__cxxabiv1::__si_class_type_info`

The virtual table for the `__cxxabiv1::__si_class_type_info` class is described by Table 7-18

**Table 7-18 Primary vtable for `__cxxabiv1::__si_class_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__si_class_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__si_class_type_info::~~si_class_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__si_class_type_info::~~si_class_type_info()</code>
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	<code>__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>__cxxabiv1::__class_type_info::__do_u</code>

	<code>pcast(__cxxabiv1::__class_type_info const*, void**) const</code>
<code>vfunc[6]:</code>	<code>__cxxabiv1::__si_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&amp;) const</code>
<code>vfunc[7]:</code>	<code>__cxxabiv1::__si_class_type_info::__do_dynccast(long, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynccast_result&amp;) const</code>
<code>vfunc[8]:</code>	<code>__cxxabiv1::__si_class_type_info::__do_find_public_src(long, void const*, __cxxabiv1::__class_type_info const*, void const*) const</code>

The Run Time Type Information for the `__cxxabiv1::__si_class_type_info` class is described by Table 7-19

**Table 7-19 typeinfo for `__cxxabiv1::__si_class_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__si_class_type_info</code>

### 7.1.11.2 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 7-20, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-20 libstdc++ - Class `__cxxabiv1::__si_class_type_info` Function Interfaces**

<code>__cxxabiv1::__si_class_type_info::__do_dynccast(long, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynccast_result&amp;) const(CXXABI_1.3) [1]</code>
<code>__cxxabiv1::__si_class_type_info::__do_find_public_src(long, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [1]</code>

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.12 Class `__cxxabiv1::__vmi_class_type_info`

#### 7.1.12.1 Class data for `__cxxabiv1::__vmi_class_type_info`

The virtual table for the `__cxxabiv1::__vmi_class_type_info` class is described by Table 7-21

**Table 7-21 Primary vtable for `__cxxabiv1::__vmi_class_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__vmi_class_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__vmi_class_type_info::~~ __vmi_class_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__vmi_class_type_info::~~ __vmi_class_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__class_type_info::__do_ca tch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>__cxxabiv1::__class_type_info::__do_u pcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__vmi_class_type_info::__ do_upcast(__cxxabiv1::__class_type_in fo const*, void const*, __cxxabiv1::__class_type_info::__upcas t_result&amp;) const</code>
vfunc[7]:	<code>__cxxabiv1::__vmi_class_type_info::__ do_dyncast(long, __cxxabiv1::__class_type_info::__sub_k ind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynca st_result&amp;) const</code>
vfunc[8]:	<code>__cxxabiv1::__vmi_class_type_info::__ do_find_public_src(long, void const*, __cxxabiv1::__class_type_info const*, void const*) const</code>

The Run Time Type Information for the `__cxxabiv1::__vmi_class_type_info` class is described by Table 7-22

**Table 7-22 typeid for \_\_cxxabiv1::\_\_vmi\_class\_type\_info**

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

**7.1.12.2 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 7-23, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-23 libstdc++ - Class \_\_cxxabiv1::\_\_vmi\_class\_type\_info Function Interfaces**

__cxxabiv1::__vmi_class_type_info::__do_dynccast(long, __cxxabiv1::__class_type_info::__sub_kind, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__dynccast_result&) const(CXXABI_1.3) [1]
__cxxabiv1::__vmi_class_type_info::__do_find_public_src(long, void const*, __cxxabiv1::__class_type_info const*, void const*) const(CXXABI_1.3) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

**7.1.13 Class \_\_cxxabiv1::\_\_fundamental\_type\_info****7.1.13.1 Class data for \_\_cxxabiv1::\_\_fundamental\_type\_info**

The virtual table for the \_\_cxxabiv1::\_\_fundamental\_type\_info class is described by Table 7-24

**Table 7-24 Primary vtable for \_\_cxxabiv1::\_\_fundamental\_type\_info**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for __cxxabiv1::__fundamental_type_info
vfunc[0]:	__cxxabiv1::__fundamental_type_info:: ~__fundamental_type_info()
vfunc[1]:	__cxxabiv1::__fundamental_type_info:: ~__fundamental_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__c lass_type_info const*, void**) const

The Run Time Type Information for the `__cxxabiv1::__fundamental_type_info` class is described by Table 7-25

**Table 7-25 typeinfo for `__cxxabiv1::__fundamental_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__fundamental_type_info</code>

### 7.1.13.2 Interfaces for Class `__cxxabiv1::__fundamental_type_info`

No external methods are defined for libstdc++ - Class  
`__cxxabiv1::__fundamental_type_info`

### 7.1.14 Class `__cxxabiv1::__pointer_to_member_type_info`

#### 7.1.14.1 Class data for `__cxxabiv1::__pointer_to_member_type_info`

The virtual table for the `__cxxabiv1::__pointer_to_member_type_info` class is described by Table 7-26

**Table 7-26 Primary vtable for `__cxxabiv1::__pointer_to_member_type_info`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__pointer_to_member_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__pointer_to_member_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code>

The Run Time Type Information for the  
`__cxxabiv1::__pointer_to_member_type_info` class is described by Table 7-27



**Table 7-27 typeid for `__cxxabiv1::__pointer_to_member_type_info`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>__cxxabiv1::__pointer_to_member_type_info</code>

**7.1.14.2 Interfaces for Class****`__cxxabiv1::__pointer_to_member_type_info`**

No external methods are defined for libstdc++ - Class

`__cxxabiv1::__pointer_to_member_type_info`

**7.1.15 Class `__gnu_cxx::stdio_filebuf<char, char_traits<char>>`****7.1.15.1 Class data for `__gnu_cxx::stdio_filebuf<char, char_traits<char>>`**

The virtual table for the `__gnu_cxx::stdio_filebuf<char, std::char_traits<char>>` class is described by Table 7-28

**Table 7-28 Primary vtable for `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>__gnu_cxx::stdio_sync_filebuf&lt;char, char_traits&lt;char&gt;&gt;</code>
vfunc[0]:	Unspecified
vfunc[1]:	Unspecified
vfunc[2]:	<code>basic_streambuf&lt;char, char_traits&lt;char&gt;&gt;::imbue(locale const&amp;)</code>
vfunc[3]:	<code>basic_streambuf&lt;char, char_traits&lt;char&gt;&gt;::setbuf(char*, long)</code>
vfunc[4]:	<code>basic_filebuf&lt;char, char_traits&lt;char&gt;&gt;::seekoff(long, _Ios_Seekdir, _Ios_Openmode)</code>
vfunc[5]:	<code>basic_filebuf&lt;char, char_traits&lt;char&gt;&gt;::seekpos(fpos&lt;__mbstate_t&gt;, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_filebuf&lt;char, char_traits&lt;char&gt;&gt;::sync()</code>
vfunc[7]:	<code>basic_streambuf&lt;char, char_traits&lt;char&gt;&gt;::showmanyc()</code>
vfunc[8]:	<code>basic_filebuf&lt;char, char_traits&lt;char&gt;&gt;</code>

	>::xsgetn(char*, long)
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*, long)
vfunc[13]:	basic_filebuf<char, char_traits<char>>::overflow(int)

### 7.1.15.2 Interfaces for Class `__gnu_cxx::stdio_filebuf<char, char_traits<char>>`

No external methods are defined for libstdc++ - Class `__gnu_cxx::stdio_filebuf<char, std::char_traits<char>>`

### 7.1.16 Class `__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>>`

#### 7.1.16.1 Class data for `__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>>`

The virtual table for the `__gnu_cxx::stdio_filebuf<wchar_t, std::char_traits<wchar_t>>` class is described by Table 7-29

**Table 7-29 Primary vtable for `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__gnu_cxx::stdio_sync_filebuf&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	Unspecified
vfunc[1]:	Unspecified
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*, long)
vfunc[4]:	basic_filebuf<wchar_t, char_traits<wchar_t>>::setbuf(wchar_t*, long)

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

#### 7.1.16.2 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> >`

#### 7.1.17 Class `__gnu_cxx::__pool_alloc_base`

##### 7.1.17.1 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 7-30, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-30 libstdcxx - Class `__gnu_cxx::__pool_alloc_base` Function Interfaces**

<code>__gnu_cxx::__pool_alloc_base::_M_get_free_list(unsigned long)(GLIBCXX_3.4.2)</code> [1]
<code>__gnu_cxx::__pool_alloc_base::_M_refill(unsigned long)(GLIBCXX_3.4.2)</code> [1]

*Referenced Specification(s)*

[1]. this specification

### 7.1.18 Class `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char> >`

#### 7.1.18.1 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> >`

### 7.1.19 Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t> >`

#### 7.1.19.1 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> >`

### 7.1.20 Class `exception`

#### 7.1.20.1 Class data for `exception`

The virtual table for the `std::exception` class is described by Table 7-31

**Table 7-31 Primary vtable for `exception`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>exception</code>
<code>vfunc[0]:</code>	<code>exception::~~exception()</code>
<code>vfunc[1]:</code>	<code>exception::~~exception()</code>
<code>vfunc[2]:</code>	<code>exception::what() const</code>

The Run Time Type Information for the `std::exception` class is described by Table 7-32

**Table 7-32 typeinfo for `exception`**

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	typeinfo name for <code>exception</code>

#### 7.1.20.2 Interfaces for Class `exception`

No external methods are defined for libstdcxx - Class `std::exception`

### 7.1.21 Class `bad_typeid`

#### 7.1.21.1 Class data for `bad_typeid`

The virtual table for the `std::bad_typeid` class is described by Table 7-33

**Table 7-33 Primary vtable for bad\_typeid**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for bad_typeid
vfunc[0]:	bad_typeid::~~bad_typeid()
vfunc[1]:	bad_typeid::~~bad_typeid()
vfunc[2]:	exception::what() const

The Run Time Type Information for the std::bad\_typeid class is described by Table 7-34

**Table 7-34 typeinfo for bad\_typeid**

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

### 7.1.21.2 Interfaces for Class bad\_typeid

No external methods are defined for libstdcxx - Class std::bad\_typeid

## 7.1.22 Class logic\_error

### 7.1.22.1 Class data for logic\_error

The virtual table for the std::logic\_error class is described by Table 7-35

**Table 7-35 Primary vtable for logic\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for logic_error
vfunc[0]:	logic_error::~~logic_error()
vfunc[1]:	logic_error::~~logic_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::logic\_error class is described by Table 7-36

**Table 7-36 typeinfo for logic\_error**

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

### 7.1.22.2 Interfaces for Class logic\_error

No external methods are defined for libstdcxx - Class std::logic\_error

### 7.1.23 Class range\_error

#### 7.1.23.1 Class data for range\_error

The virtual table for the `std::range_error` class is described by Table 7-37

**Table 7-37 Primary vtable for range\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for range_error
vfunc[0]:	range_error::~~range_error()
vfunc[1]:	range_error::~~range_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the `std::range_error` class is described by Table 7-38

**Table 7-38 typeid for range\_error**

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

#### 7.1.23.2 Interfaces for Class range\_error

No external methods are defined for `libstdc++` - Class `std::range_error`

### 7.1.24 Class domain\_error

#### 7.1.24.1 Class data for domain\_error

The virtual table for the `std::domain_error` class is described by Table 7-39

**Table 7-39 Primary vtable for domain\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for domain_error
vfunc[0]:	domain_error::~~domain_error()
vfunc[1]:	domain_error::~~domain_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the `std::domain_error` class is described by Table 7-40

**Table 7-40 typeid for domain\_error**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
-------------	--

Name	typeid name for domain_error
------	------------------------------

### 7.1.24.2 Interfaces for Class domain\_error

No external methods are defined for libstdc++ - Class std::domain\_error

## 7.1.25 Class length\_error

### 7.1.25.1 Class data for length\_error

The virtual table for the std::length\_error class is described by Table 7-41

**Table 7-41 Primary vtable for length\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for length_error
vfunc[0]:	length_error::~~length_error()
vfunc[1]:	length_error::~~length_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::length\_error class is described by Table 7-42

**Table 7-42 typeid for length\_error**

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

### 7.1.25.2 Interfaces for Class length\_error

No external methods are defined for libstdc++ - Class std::length\_error

## 7.1.26 Class out\_of\_range

### 7.1.26.1 Class data for out\_of\_range

The virtual table for the std::out\_of\_range class is described by Table 7-43

**Table 7-43 Primary vtable for out\_of\_range**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for out_of_range
vfunc[0]:	out_of_range::~~out_of_range()
vfunc[1]:	out_of_range::~~out_of_range()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the `std::out_of_range` class is described by Table 7-44

**Table 7-44** typeinfo for `out_of_range`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>out_of_range</code>

### 7.1.26.2 Interfaces for Class `out_of_range`

No external methods are defined for `libstdc++` - Class `std::out_of_range`

## 7.1.27 Class `bad_exception`

### 7.1.27.1 Class data for `bad_exception`

The virtual table for the `std::bad_exception` class is described by Table 7-45

**Table 7-45** Primary vtable for `bad_exception`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>bad_exception</code>
<code>vfunc[0]:</code>	<code>bad_exception::~~bad_exception()</code>
<code>vfunc[1]:</code>	<code>bad_exception::~~bad_exception()</code>
<code>vfunc[2]:</code>	<code>exception::what() const</code>

The Run Time Type Information for the `std::bad_exception` class is described by Table 7-46

**Table 7-46** typeinfo for `bad_exception`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>bad_exception</code>

### 7.1.27.2 Interfaces for Class `bad_exception`

No external methods are defined for `libstdc++` - Class `std::bad_exception`

## 7.1.28 Class `runtime_error`

### 7.1.28.1 Class data for `runtime_error`

The virtual table for the `std::runtime_error` class is described by Table 7-47

**Table 7-47** Primary vtable for `runtime_error`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>runtime_error</code>



vfunc[0]:	runtime_error::~runtime_error()
vfunc[1]:	runtime_error::~runtime_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::runtime\_error class is described by Table 7-48

**Table 7-48 typeid for runtime\_error**

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

### 7.1.28.2 Interfaces for Class runtime\_error

No external methods are defined for libstdc++ - Class std::runtime\_error

## 7.1.29 Class overflow\_error

### 7.1.29.1 Class data for overflow\_error

The virtual table for the std::overflow\_error class is described by Table 7-49

**Table 7-49 Primary vtable for overflow\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for overflow_error
vfunc[0]:	overflow_error::~overflow_error()
vfunc[1]:	overflow_error::~overflow_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::overflow\_error class is described by Table 7-50

**Table 7-50 typeid for overflow\_error**

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

### 7.1.29.2 Interfaces for Class overflow\_error

No external methods are defined for libstdc++ - Class std::overflow\_error

## 7.1.30 Class underflow\_error

### 7.1.30.1 Class data for underflow\_error

The virtual table for the std::underflow\_error class is described by Table 7-51

**Table 7-51 Primary vtable for underflow\_error**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for underflow_error
vfunc[0]:	underflow_error::~~underflow_error()
vfunc[1]:	underflow_error::~~underflow_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::underflow\_error class is described by Table 7-52

**Table 7-52 typeinfo for underflow\_error**

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

### 7.1.30.2 Interfaces for Class underflow\_error

No external methods are defined for libstdcxx - Class std::underflow\_error

### 7.1.31 Class invalid\_argument

#### 7.1.31.1 Class data for invalid\_argument

The virtual table for the std::invalid\_argument class is described by Table 7-53

**Table 7-53 Primary vtable for invalid\_argument**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for invalid_argument
vfunc[0]:	invalid_argument::~~invalid_argument( )
vfunc[1]:	invalid_argument::~~invalid_argument( )
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::invalid\_argument class is described by Table 7-54

**Table 7-54 typeinfo for invalid\_argument**

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

### 7.1.31.2 Interfaces for Class `invalid_argument`

No external methods are defined for `libstdcxx` - Class `std::invalid_argument`

### 7.1.32 Class `bad_cast`

#### 7.1.32.1 Class data for `bad_cast`

The virtual table for the `std::bad_cast` class is described by Table 7-55

**Table 7-55 Primary vtable for `bad_cast`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>bad_cast</code>
<code>vfunc[0]:</code>	<code>bad_cast::~~bad_cast()</code>
<code>vfunc[1]:</code>	<code>bad_cast::~~bad_cast()</code>
<code>vfunc[2]:</code>	<code>exception::what() const</code>

The Run Time Type Information for the `std::bad_cast` class is described by Table 7-56

**Table 7-56 typeinfo for `bad_cast`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>bad_cast</code>

### 7.1.32.2 Interfaces for Class `bad_cast`

No external methods are defined for `libstdcxx` - Class `std::bad_cast`

### 7.1.33 Class `bad_alloc`

#### 7.1.33.1 Class data for `bad_alloc`

The virtual table for the `std::bad_alloc` class is described by Table 7-57

**Table 7-57 Primary vtable for `bad_alloc`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>bad_alloc</code>
<code>vfunc[0]:</code>	<code>bad_alloc::~~bad_alloc()</code>
<code>vfunc[1]:</code>	<code>bad_alloc::~~bad_alloc()</code>
<code>vfunc[2]:</code>	<code>exception::what() const</code>

The Run Time Type Information for the `std::bad_alloc` class is described by Table 7-58

Table 7-58 typeid for bad\_alloc

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

**7.1.33.2 Interfaces for Class bad\_alloc**

No external methods are defined for libstdc++ - Class std::bad\_alloc

**7.1.34 struct \_\_numeric\_limits\_base****7.1.34.1 Interfaces for struct \_\_numeric\_limits\_base**

No external methods are defined for libstdc++ - struct \_\_numeric\_limits\_base

**7.1.35 struct numeric\_limits<long double>****7.1.35.1 Interfaces for struct numeric\_limits<long double>**

No external methods are defined for libstdc++ - struct numeric\_limits<long double>

**7.1.36 struct numeric\_limits<long long>****7.1.36.1 Interfaces for struct numeric\_limits<long long>**

No external methods are defined for libstdc++ - struct numeric\_limits<long long>

**7.1.37 struct numeric\_limits<unsigned long long>****7.1.37.1 Interfaces for struct numeric\_limits<unsigned long long>**

No external methods are defined for libstdc++ - struct numeric\_limits<unsigned long long>

**7.1.38 struct numeric\_limits<float>****7.1.38.1 Interfaces for struct numeric\_limits<float>**

No external methods are defined for libstdc++ - struct numeric\_limits<float>

**7.1.39 struct numeric\_limits<double>****7.1.39.1 Interfaces for struct numeric\_limits<double>**

No external methods are defined for libstdc++ - struct numeric\_limits<double>

**7.1.40 struct numeric\_limits<short>****7.1.40.1 Interfaces for struct numeric\_limits<short>**

No external methods are defined for libstdc++ - struct numeric\_limits<short>

**7.1.41 struct numeric\_limits<unsigned short>****7.1.41.1 Interfaces for struct numeric\_limits<unsigned short>**

No external methods are defined for libstdc++ - struct numeric\_limits<unsigned short>

**7.1.42 struct numeric\_limits<int>****7.1.42.1 Interfaces for struct numeric\_limits<int>**

No external methods are defined for libstdcxx - struct numeric\_limits<int>

**7.1.43 struct numeric\_limits<unsigned int>****7.1.43.1 Interfaces for struct numeric\_limits<unsigned int>**

No external methods are defined for libstdcxx - struct numeric\_limits<unsigned int>

**7.1.44 struct numeric\_limits<long>****7.1.44.1 Interfaces for struct numeric\_limits<long>**

No external methods are defined for libstdcxx - struct numeric\_limits<long>

**7.1.45 struct numeric\_limits<unsigned long>****7.1.45.1 Interfaces for struct numeric\_limits<unsigned long>**

No external methods are defined for libstdcxx - struct numeric\_limits<unsigned long>

**7.1.46 struct numeric\_limits<wchar\_t>****7.1.46.1 Interfaces for struct numeric\_limits<wchar\_t>**

No external methods are defined for libstdcxx - struct numeric\_limits<wchar\_t>

**7.1.47 struct numeric\_limits<unsigned char>****7.1.47.1 Interfaces for struct numeric\_limits<unsigned char>**

No external methods are defined for libstdcxx - struct numeric\_limits<unsigned char>

**7.1.48 struct numeric\_limits<signed char>****7.1.48.1 Interfaces for struct numeric\_limits<signed char>**

No external methods are defined for libstdcxx - struct numeric\_limits<signed char>

**7.1.49 struct numeric\_limits<char>****7.1.49.1 Interfaces for struct numeric\_limits<char>**

No external methods are defined for libstdcxx - struct numeric\_limits<char>

**7.1.50 struct numeric\_limits<bool>****7.1.50.1 Interfaces for struct numeric\_limits<bool>**

No external methods are defined for libstdcxx - struct numeric\_limits<bool>

## 7.1.51 Class `ctype_base`

### 7.1.51.1 Class data for `ctype_base`

The Run Time Type Information for the `std::ctype_base` class is described by Table 7-59

**Table 7-59** `typeinfo` for `ctype_base`

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	<code>typeinfo</code> name for <code>ctype_base</code>

### 7.1.51.2 Interfaces for Class `ctype_base`

No external methods are defined for `libstdc++` - Class `std::ctype_base`

## 7.1.52 Class `__ctype_abstract_base<char>`

### 7.1.52.1 Class data for `__ctype_abstract_base<char>`

The virtual table for the `std::__ctype_abstract_base<char>` class is described by Table 7-60

**Table 7-60** Primary vtable for `__ctype_abstract_base<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>__ctype_abstract_base&lt;char&gt;</code>
<code>vfunc[0]:</code>	
<code>vfunc[1]:</code>	
<code>vfunc[2]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[3]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[4]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[5]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[6]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[7]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[8]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[9]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[10]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[11]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[12]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[13]:</code>	<code>__cxa_pure_virtual</code>

### 7.1.52.2 Interfaces for Class `__ctype_abstract_base<char>`

No external methods are defined for libstdcxx - Class  
`std::__ctype_abstract_base<char>`

### 7.1.53 Class `__ctype_abstract_base<wchar_t>`

#### 7.1.53.1 Class data for `__ctype_abstract_base<wchar_t>`

The virtual table for the `std::__ctype_abstract_base<wchar_t>` class is described by Table 7-61

**Table 7-61 Primary vtable for `__ctype_abstract_base<wchar_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__ctype_abstract_base&lt;wchar_t&gt;</code>
<code>vfunc[0]:</code>	
<code>vfunc[1]:</code>	
<code>vfunc[2]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[3]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[4]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[5]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[6]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[7]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[8]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[9]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[10]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[11]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[12]:</code>	<code>__cxa_pure_virtual</code>
<code>vfunc[13]:</code>	<code>__cxa_pure_virtual</code>

### 7.1.53.2 Interfaces for Class `__ctype_abstract_base<wchar_t>`

No external methods are defined for libstdcxx - Class  
`std::__ctype_abstract_base<wchar_t>`

### 7.1.54 Class `ctype<char>`

#### 7.1.54.1 Class data for `ctype<char>`

The virtual table for the `std::ctype<char>` class is described by Table 7-62

**Table 7-62 Primary vtable for `ctype<char>`**

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeid for ctype<char>
vfunc[0]:	ctype<char>::~~ctype()
vfunc[1]:	ctype<char>::~~ctype()
vfunc[2]:	ctype<char>::~do_toupper(char) const
vfunc[3]:	ctype<char>::~do_toupper(char*, char const*) const
vfunc[4]:	ctype<char>::~do_tolower(char) const
vfunc[5]:	ctype<char>::~do_tolower(char*, char const*) const
vfunc[6]:	ctype<char>::~do_widen(char) const
vfunc[7]:	ctype<char>::~do_widen(char const*, char const*, char*) const
vfunc[8]:	ctype<char>::~do_narrow(char, char) const
vfunc[9]:	ctype<char>::~do_narrow(char const*, char const*, char, char*) const

#### 7.1.54.2 Interfaces for Class ctype<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::ctype<char> specified in Table 7-63, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-63 libstdcxx - Class ctype<char> Function Interfaces**

ctype<char>::ctype(__locale_struct*, unsigned short const*, bool, unsigned long)(GLIBCXX_3.4) [1]
ctype<char>::ctype(unsigned short const*, bool, unsigned long)(GLIBCXX_3.4) [1]
ctype<char>::ctype(__locale_struct*, unsigned short const*, bool, unsigned long)(GLIBCXX_3.4) [1]
ctype<char>::ctype(unsigned short const*, bool, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

#### 7.1.55 Class ctype<wchar\_t>

##### 7.1.55.1 Class data for ctype<wchar\_t>

The virtual table for the std::ctype<wchar\_t> class is described by Table 7-64



**Table 7-64 Primary vtable for ctype<wchar\_t>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for ctype<wchar_t>
vfunc[0]:	ctype<wchar_t>::~~ctype()
vfunc[1]:	ctype<wchar_t>::~~ctype()
vfunc[2]:	ctype<wchar_t>::do_is(unsigned short, wchar_t) const
vfunc[3]:	ctype<wchar_t>::do_is(wchar_t const*, wchar_t const*, unsigned short*) const
vfunc[4]:	ctype<wchar_t>::do_scan_is(unsigned short, wchar_t const*, wchar_t const*) const
vfunc[5]:	ctype<wchar_t>::do_scan_not(unsigned short, wchar_t const*, wchar_t const*) const
vfunc[6]:	ctype<wchar_t>::do_toupper(wchar_t) const
vfunc[7]:	ctype<wchar_t>::do_toupper(wchar_t*, wchar_t const*) const
vfunc[8]:	ctype<wchar_t>::do_tolower(wchar_t) const
vfunc[9]:	ctype<wchar_t>::do_tolower(wchar_t*, wchar_t const*) const
vfunc[10]:	ctype<wchar_t>::do_widen(char) const
vfunc[11]:	ctype<wchar_t>::do_widen(char const*, char const*, wchar_t*) const
vfunc[12]:	ctype<wchar_t>::do_narrow(wchar_t, char) const
vfunc[13]:	ctype<wchar_t>::do_narrow(wchar_t const*, wchar_t const*, char, char*) const

The Run Time Type Information for the std::ctype<wchar\_t> class is described by Table 7-65

**Table 7-65 typeinfo for ctype<wchar\_t>**

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

### 7.1.55.2 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 7-66, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-66 `libstdcxx` - Class `ctype<wchar_t>` Function Interfaces**

<code>ctype&lt;wchar_t&gt;::ctype(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>ctype&lt;wchar_t&gt;::ctype(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>ctype&lt;wchar_t&gt;::ctype(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>ctype&lt;wchar_t&gt;::ctype(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.56 Class `ctype_byname<char>`

#### 7.1.56.1 Class data for `ctype_byname<char>`

The virtual table for the `std::ctype_byname<char>` class is described by Table 7-67

**Table 7-67 Primary vtable for `ctype_byname<char>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>ctype_byname&lt;char&gt;</code>
<code>vfunc[0]:</code>	<code>ctype_byname&lt;char&gt;::~~ctype_byname( )</code>
<code>vfunc[1]:</code>	<code>ctype_byname&lt;char&gt;::~~ctype_byname( )</code>
<code>vfunc[2]:</code>	<code>ctype&lt;char&gt;::do_toupper(char) const</code>
<code>vfunc[3]:</code>	<code>ctype&lt;char&gt;::do_toupper(char*, char const*) const</code>
<code>vfunc[4]:</code>	<code>ctype&lt;char&gt;::do_tolower(char) const</code>
<code>vfunc[5]:</code>	<code>ctype&lt;char&gt;::do_tolower(char*, char const*) const</code>
<code>vfunc[6]:</code>	<code>ctype&lt;char&gt;::do_widen(char) const</code>
<code>vfunc[7]:</code>	<code>ctype&lt;char&gt;::do_widen(char const*, char const*, char*) const</code>
<code>vfunc[8]:</code>	<code>ctype&lt;char&gt;::do_narrow(char, char) const</code>
<code>vfunc[9]:</code>	<code>ctype&lt;char&gt;::do_narrow(char const*, char const*, char, char*) const</code>

The Run Time Type Information for the `std::ctype_byname<char>` class is described by Table 7-68

**Table 7-68 typeinfo for `ctype_byname<char>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>ctype_byname&lt;char&gt;</code>

### 7.1.56.2 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 7-69, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-69 `libstdcxx` - Class `ctype_byname<char>` Function Interfaces**

<code>ctype_byname&lt;char&gt;::ctype_byname(char const*, unsigned long)(GLIBCXX_3.4)</code> [1]
<code>ctype_byname&lt;char&gt;::ctype_byname(char const*, unsigned long)(GLIBCXX_3.4)</code> [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.57 Class `ctype_byname<wchar_t>`

#### 7.1.57.1 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 7-70, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-70 `libstdcxx` - Class `ctype_byname<wchar_t>` Function Interfaces**

<code>ctype_byname&lt;wchar_t&gt;::ctype_byname(char const*, unsigned long)(GLIBCXX_3.4)</code> [1]
<code>ctype_byname&lt;wchar_t&gt;::ctype_byname(char const*, unsigned long)(GLIBCXX_3.4)</code> [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.58 Class `basic_string<char, char_traits<char>, allocator<char>>`

#### 7.1.58.1 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 7-71, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-71 libstdcxx - Class `basic_string<char, char_traits<char>, allocator<char>>` > Function Interfaces**

<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_of(char const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_of(char const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::find_last_of(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_of(char, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_of(char const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_of(char const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::find_first_of(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_of(char, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_not_of(char const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_not_of(char const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::find_last_not_of(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_last_not_of(char, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_not_of(char const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_not_of(char const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::find_first_not_of(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::find_first_not_of(char, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::at(unsigned long) const(GLIBCXX_3.4) [1]</code>

<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::copy(char*, unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::find(char const*, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::find(char const*, unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::find(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::find(char, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::rfind(char const*, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::rfind(char const*, unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::rfind(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::rfind(char, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::substr(unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::compare(unsigned long, unsigned long, char const*) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::compare(unsigned long, unsigned long, char const*, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::compare(unsigned long, unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::compare(unsigned long, unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::_M_check(unsigned long, char const*) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::_M_limit(unsigned long, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::operator[](unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::_S_construct(unsigned long, char, allocator&lt;char&gt; const&amp;)</code> (GLIBCXX_3.4) [1]
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::_M_replace_aux(unsigned long, unsigned long, unsigned long,</code>

<code>char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_M_replace_safe(unsigned long, unsigned long, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_at(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_Rep::_M_clone(allocator&lt;char&gt; const&amp;, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_Rep::_S_create(unsigned long, unsigned long, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_erase(unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_append(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_append(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_append(unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_assign(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_assign(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_assign(unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;::_insert(__gnu_cxx::__normal_iterator&lt;char*, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; &gt;, unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_insert(unsigned long, char const*)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_insert(unsigned long, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_insert(unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_insert(unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::_insert(unsigned long, unsigned long, char)(GLIBCXX_3.4) [1]</code>

<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::resize(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::resize(unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(__gnu_cxx::__normal_iterator&lt;char*, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; &gt;, __gnu_cxx::__normal_iterator&lt;char*, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; &gt;, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(__gnu_cxx::__normal_iterator&lt;char*, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; &gt;, __gnu_cxx::__normal_iterator&lt;char*, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; &gt;, unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(unsigned long, unsigned long, char const*)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(unsigned long, unsigned long, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(unsigned long, unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(unsigned long, unsigned long, basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::replace(unsigned long, unsigned long, unsigned long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::reserve(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::M_mutate(unsigned long, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(char const*, unsigned long, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(unsigned long, char, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(char const*, unsigned long, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>

<code>&gt;::basic_string(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt; const&amp;, unsigned long, unsigned long, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::basic_string(unsigned long, char, allocator&lt;char&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::operator[] (unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.59 Class `basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`

### 7.1.59.1 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 7-72, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-72 libstdc++ - Class `basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >` Function Interfaces**

<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_last_of(wchar_t const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_last_of(wchar_t const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_last_of(basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_last_of(wchar_t, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_first_of(wchar_t const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_first_of(wchar_t const*, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_first_of(basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt; const&amp;, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::find_first_of(wchar_t, unsigned long) const(GLIBCXX_3.4) [1]</code>



[illegible]

<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::substr(unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::compare(unsigned long, unsigned long, wchar_t const*) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::compare(unsigned long, unsigned long, wchar_t const*, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::compare(unsigned long, unsigned long, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::compare(unsigned long, unsigned long, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;, unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_M_check(unsigned long, char const*) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_M_limit(unsigned long, unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::operator[](unsigned long) const(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_S_construct(unsigned long, wchar_t, allocator&lt;wchar_t&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_M_replace_aux(unsigned long, unsigned long, unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_M_replace_safe(unsigned long, unsigned long, wchar_t const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::at(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_Rep::_M_clone(allocator&lt;wchar_t&gt; const&amp;, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::_Rep::_S_create(unsigned long, unsigned long, allocator&lt;wchar_t&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::erase(unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::append(wchar_t const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::append(basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; &gt;</code>

<code>const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::append(unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::assign(wchar_t const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::assign(basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::assign(unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(__gnu_cxx::__normal_iterator&lt;wchar_t*, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&gt;, unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(unsigned long, wchar_t const*)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(unsigned long, wchar_t const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(unsigned long, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(unsigned long, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;, unsigned long, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::insert(unsigned long, unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::resize(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::resize(unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::replace(__gnu_cxx::__normal_iterator&lt;wchar_t*, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&gt;, __gnu_cxx::__normal_iterator&lt;wchar_t*, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&gt;, wchar_t const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::replace(__gnu_cxx::__normal_iterator&lt;wchar_t*, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&gt;, __gnu_cxx::__normal_iterator&lt;wchar_t*, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&gt;, unsigned long, wchar_t)(GLIBCXX_3.4) [1]</code>
<code>basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::replace(unsigned long, unsigned long, wchar_t const*)(GLIBCXX_3.4) [1]</code>



>::operator[](unsigned long)(GLIBCXX_3.4) [1]
---

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.60 Class `basic_stringstream<char, char_traits<char>, allocator<char> >`

### 7.1.60.1 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 7-73

**Table 7-73 Primary vtable for `basic_stringstream<char, char_traits<char>, allocator<char> >`**

Base Offset	0
Virtual Base Offset	104
RTTI	typeinfo for <code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	<code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_stringstream()</code>
vfunc[1]:	<code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_stringstream()</code>

**Table 7-74 Secondary vtable for `basic_stringstream<char, char_traits<char>, allocator<char> >`**

Base Offset	-16
Virtual Base Offset	88
RTTI	typeinfo for <code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	non-virtual thunk to <code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_stringstream()</code>
vfunc[1]:	non-virtual thunk to <code>basic_stringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_stringstream()</code>

**Table 7-75 Secondary vtable for `basic_stringstream<char, char_traits<char>, allocator<char> >`**

Base Offset	-104
-------------	------

Virtual Base Offset	-104
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 7-76

**Table 7-76 VTT for basic\_stringstream<char, char\_traits<char>, allocator<char> >**

VTT Name	_ZTTSt18basic_stringstreamIcSt11char_traitsIcESaIcEE
Number of Entries	10

### 7.1.60.2 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 7-77, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-77 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) [1]
non-virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~~basic_stringstream()(GLIBCXX_3.4) [1]
virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~~basic_stringstream()(GLIBCXX_3.4) [1]
virtual thunk to basic_stringstream<char, char_traits<char>, allocator<char> >::~~basic_stringstream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.61 Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

#### 7.1.61.1 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 7-78

**Table 7-78 Primary vtable for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`**

Base Offset	0
Virtual Base Offset	104
RTTI	typeinfo for <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	<code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~basic_stringstream()</code>
vfunc[1]:	<code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~basic_stringstream()</code>

**Table 7-79 Secondary vtable for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`**

Base Offset	-16
Virtual Base Offset	88
RTTI	typeinfo for <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	non-virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~basic_stringstream()</code>
vfunc[1]:	non-virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~basic_stringstream()</code>

**Table 7-80 Secondary vtable for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`**

Base Offset	-104
Virtual Base Offset	-104
RTTI	typeinfo for <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;</code>
<code>vfunc[0]:</code>	virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code>
<code>vfunc[1]:</code>	virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code>

The VTT for the `std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` class is described by Table 7-81

**Table 7-81 VTT for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`**

VTT Name	<code>_ZTTSt18basic_stringstreamIwSt11char_traitsIwESaIwEE</code>
Number of Entries	10

### 7.1.61.2 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 7-82, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-82 `libstdcxx` - Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >` Function Interfaces**

non-virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code> (GLIBCXX_3.4) [1]
non-virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_stringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_stringstream()</code> (GLIBCXX_3.4) [1]



Referenced Specification(s)

[1]. Itanium C++ ABI

## 7.1.62 Class `basic_istream<char, char_traits<char>, allocator<char> >`

### 7.1.62.1 Class data for `basic_istream<char, char_traits<char>, allocator<char> >`

The virtual table for the `std::basic_istream<char, std::char_traits<char>, std::allocator<char> >` class is described by Table 7-83

**Table 7-83 Primary vtable for `basic_istream<char, char_traits<char>, allocator<char> >`**

Base Offset	0
Virtual Base Offset	96
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	<code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_istream()</code>
vfunc[1]:	<code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_istream()</code>

**Table 7-84 Secondary vtable for `basic_istream<char, char_traits<char>, allocator<char> >`**

Base Offset	-96
Virtual Base Offset	-96
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_istream()</code>
vfunc[1]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_istream()</code>

The VTT for the `std::basic_istream<char, std::char_traits<char>, std::allocator<char> >` class is described by Table 7-85

**Table 7-85 VTT for `basic_istream<char, char_traits<char>, allocator<char> >`**

VTT Name	<code>_ZTTSt19basic_istreamIcSt11char</code>
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	_traitsIcESaIcEE
Number of Entries	4

### 7.1.62.2 Interfaces for Class `basic_istream<char, char_traits<char>, allocator<char>>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::basic_istream<char, std::char_traits<char>, std::allocator<char>>` specified in Table 7-86, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-86 libstdcxx - Class `basic_istream<char, char_traits<char>, allocator<char>>` Function Interfaces**

virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::~basic_istream()(GLIBCXX_3.4)</code> [1]
virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::~basic_istream()(GLIBCXX_3.4)</code> [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.63 Class `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

#### 7.1.63.1 Class data for `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

The virtual table for the `std::basic_istream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` class is described by Table 7-87

**Table 7-87 Primary vtable for `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`**

Base Offset	0
Virtual Base Offset	96
RTTI	typeinfo for <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	<code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::~basic_istream()</code>
vfunc[1]:	<code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::~basic_istream()</code>

**Table 7-88 Secondary vtable for `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`**

Base Offset	-96
Virtual Base Offset	-96
RTTI	typeinfo for <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;</code>
<code>vfunc[0]:</code>	virtual thunk to <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_istream()</code>
<code>vfunc[1]:</code>	virtual thunk to <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_istream()</code>

The VTT for the `std::basic_istream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` class is described by Table 7-89

**Table 7-89 VTT for `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`**

VTT Name	<code>_ZTTSt19basic_istreamIwSt11char_traitsIwESaIwEE</code>
Number of Entries	4

### 7.1.63.2 Interfaces for Class `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::basic_istream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` specified in Table 7-90, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-90 `libstdcxx` - Class `basic_istream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >` Function Interfaces**

virtual thunk to <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_istream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt; &gt;::~~basic_istream()</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.64 Class `basic_ostringstream<char, char_traits<char>, allocator<char> >`

#### 7.1.64.1 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 7-91

**Table 7-91 Primary vtable for `basic_ostringstream<char, char_traits<char>, allocator<char> >`**

Base Offset	0
Virtual Base Offset	88
RTTI	typeinfo for <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	<code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_ostringstream()</code>
vfunc[1]:	<code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_ostringstream()</code>

**Table 7-92 Secondary vtable for `basic_ostringstream<char, char_traits<char>, allocator<char> >`**

Base Offset	-88
Virtual Base Offset	-88
RTTI	typeinfo for <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;</code>
vfunc[0]:	virtual thunk to <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_ostringstream()</code>
vfunc[1]:	virtual thunk to <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt; &gt;::~~basic_ostringstream()</code>

The VTT for the `std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char> >` class is described by Table 7-93

**Table 7-93 VTT for `basic_ostringstream<char, char_traits<char>, allocator<char> >`**

VTT Name	<code>_ZTTSt19basic_ostringstreamIcSt11char_traitsIcESaIcEE</code>
Number of Entries	4

### 7.1.64.2 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 7-94, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-94 libstdcxx - Class `basic_ostringstream<char, char_traits<char>, allocator<char>>` Function Interfaces**

virtual thunk to <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::~~basic_ostringstream()(GLIBCXX_3.4)</code> [1]
virtual thunk to <code>basic_ostringstream&lt;char, char_traits&lt;char&gt;, allocator&lt;char&gt;&gt;::~~basic_ostringstream()(GLIBCXX_3.4)</code> [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.65 Class `basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

#### 7.1.65.1 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 7-95

**Table 7-95 Primary vtable for `basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`**

Base Offset	0
Virtual Base Offset	88
RTTI	typeinfo for <code>basic_ostringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	<code>basic_ostringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::~~basic_ostringstream()</code>
vfunc[1]:	<code>basic_ostringstream&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;::~basic_ostringstream()</code>

**Table 7-96 Secondary vtable for `basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`**

Base Offset	-88
Virtual Base Offset	-88

RTTI	typeid 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 7-97

**Table 7-97 VTT for basic\_ostringstream<wchar\_t, char\_traits<wchar\_t>, allocator<wchar\_t> >**

VTT Name	_ZTTSt19basic_ostringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	4

### 7.1.65.2 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 7-98, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-98 libstdc++ - 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) [1]
virtual thunk to basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~~basic_ostringstream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.66 Class basic\_stringbuf<char, char\_traits<char>, allocator<char> >

#### 7.1.66.1 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 7-99

**Table 7-99 Primary vtable for `basic_stringbuf<char, char_traits<char>, allocator<char> >`**

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

	const*, long)
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 7-100

**Table 7-100 typeid for basic\_stringbuf<char, char\_traits<char>, allocator<char> >**

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

#### 7.1.66.2 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 7-101, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-101 libstdc++ - Class basic\_stringbuf<char, char\_traits<char>, allocator<char> > Function Interfaces**

basic_stringbuf<char, char_traits<char>, allocator<char> >::setbuf(char*, long)(GLIBCXX_3.4) [1]
basic_stringbuf<char, char_traits<char>, allocator<char> >::M_sync(char*, unsigned long, unsigned long)(GLIBCXX_3.4) [1]
basic_stringbuf<char, char_traits<char>, allocator<char> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

#### 7.1.67 Class basic\_stringbuf<wchar\_t, char\_traits<wchar\_t>, allocator<wchar\_t> >

##### 7.1.67.1 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 7-102

**Table 7-102 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*, long)
vfunc[4]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekoff(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*, long)
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*, long)
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 7-103

**Table 7-103 typeid for basic\_stringbuf<wchar\_t, char\_traits<wchar\_t>, allocator<wchar\_t> >**

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

### 7.1.67.2 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 7-104, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-104 libstdc++ - 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*, long)(GLIBCXX_3.4) [1]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_sync(wchar_t*, unsigned long, unsigned long)(GLIBCXX_3.4) [1]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.68 Class basic\_istream<char, char\_traits<char> >

#### 7.1.68.1 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 7-105

**Table 7-105 Primary vtable for `basic_istream<char, char_traits<char>>`**

Base Offset	0
Virtual Base Offset	24
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;</code>
vfunc[0]:	<code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>
vfunc[1]:	<code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>

**Table 7-106 Secondary vtable for `basic_istream<char, char_traits<char>>`**

Base Offset	-16
Virtual Base Offset	8
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;</code>
vfunc[0]:	non-virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>
vfunc[1]:	non-virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>

**Table 7-107 Secondary vtable for `basic_istream<char, char_traits<char>>`**

Base Offset	-24
Virtual Base Offset	-24
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;</code>
vfunc[0]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>
vfunc[1]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt;&gt;::~~basic_istream()</code>

The VTT for the `std::basic_istream<char, std::char_traits<char>>` class is described by Table 7-108

**Table 7-108 VTT for `basic_istream<char, char_traits<char>>`**

VTT Name	<code>_ZTTSd</code>
Number of Entries	7

### 7.1.68.2 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 7-109,

with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-109 libstdc++ - Class `basic_iostream<char, char_traits<char>>` > Function Interfaces**

non-virtual thunk to <code>basic_iostream&lt;char, char_traits&lt;char&gt;&gt;</code> >::~ <code>basic_iostream()</code> (GLIBCXX_3.4) [1]
non-virtual thunk to <code>basic_iostream&lt;char, char_traits&lt;char&gt;&gt;</code> >::~ <code>basic_iostream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_iostream&lt;char, char_traits&lt;char&gt;&gt;</code> >::~ <code>basic_iostream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_iostream&lt;char, char_traits&lt;char&gt;&gt;</code> >::~ <code>basic_iostream()</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

## 7.1.69 Class `basic_iostream<wchar_t, char_traits<wchar_t>>`

### 7.1.69.1 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 7-110

**Table 7-110 Primary vtable for `basic_iostream<wchar_t, char_traits<wchar_t>>`**

Base Offset	0
Virtual Base Offset	24
RTTI	typeinfo for <code>basic_iostream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	<code>basic_iostream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code> >::~ <code>basic_iostream()</code>
vfunc[1]:	<code>basic_iostream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code> >::~ <code>basic_iostream()</code>

**Table 7-111 Secondary vtable for `basic_iostream<wchar_t, char_traits<wchar_t>>`**

Base Offset	-16
Virtual Base Offset	8
RTTI	typeinfo for <code>basic_iostream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	non-virtual thunk to <code>basic_iostream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>

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

**Table 7-112 Secondary vtable for basic\_istream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	-24
Virtual Base Offset	-24
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 7-113

**Table 7-113 VTT for basic\_istream<wchar\_t, char\_traits<wchar\_t> >**

VTT Name	_ZTTSt14basic_istreamIwSt11char_traitsIwEE
Number of Entries	7

### 7.1.69.2 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 7-114, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-114 libstdcxx - Class basic\_istream<wchar\_t, char\_traits<wchar\_t> > Function Interfaces**

non-virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~~basic_istream()(GLIBCXX_3.4) [1]
non-virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~~basic_istream()(GLIBCXX_3.4) [1]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~~basic_istream()(GLIBCXX_3.4) [1]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t> >::~~basic_istream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

## 7.1.70 Class `basic_istream<char, char_traits<char> >`

### 7.1.70.1 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 7-115

**Table 7-115 Primary vtable for `basic_istream<char, char_traits<char> >`**

Base Offset	0
Virtual Base Offset	16
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;</code>
vfunc[0]:	<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()</code>
vfunc[1]:	<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()</code>

**Table 7-116 Secondary vtable for `basic_istream<char, char_traits<char> >`**

Base Offset	-16
Virtual Base Offset	-16
RTTI	typeinfo for <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;</code>
vfunc[0]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()</code>
vfunc[1]:	virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()</code>

The VTT for the `std::basic_istream<char, std::char_traits<char> >` class is described by Table 7-117

**Table 7-117 VTT for `basic_istream<char, char_traits<char> >`**

VTT Name	<code>_ZTTSi</code>
Number of Entries	2

### 7.1.70.2 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 7-118, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-118 libstdc++ - Class `basic_istream<char, char_traits<char> >` Function Interfaces**

<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::get(char*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::get(char*, long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::read(char*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::seekg(long, _Ios_Seekdir)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::ignore(long, int)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::getline(char*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::getline(char*, long, char)(GLIBCXX_3.4) [1]</code>
<code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::readsomeline(char*, long)(GLIBCXX_3.4) [1]</code>
virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()(GLIBCXX_3.4) [2]</code>
virtual thunk to <code>basic_istream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_istream()(GLIBCXX_3.4) [2]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

[2]. Itanium C++ ABI

### 7.1.71 Class `basic_istream<wchar_t, char_traits<wchar_t> >`

#### 7.1.71.1 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 7-119

**Table 7-119 Primary vtable for `basic_istream<wchar_t, char_traits<wchar_t> >`**

Base Offset	0
Virtual Base Offset	16
RTTI	typeinfo for <code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;</code>
<code>vfunc[0]:</code>	<code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_istream()</code>
<code>vfunc[1]:</code>	<code>basic_istream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_istream()</code>

**Table 7-120 Secondary vtable for `basic_istream<wchar_t, char_traits<wchar_t> >`**

Base Offset	-16
-------------	-----

Virtual Base Offset	-16
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 7-121

**Table 7-121 VTT for basic\_istream<wchar\_t, char\_traits<wchar\_t> >**

VTT Name	_ZTTSt13basic_istreamIwSt11char_traitsIwEE
Number of Entries	2

### 7.1.71.2 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 7-122, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-122 libstdcxx - Class basic\_istream<wchar\_t, char\_traits<wchar\_t> > Function Interfaces**

basic_istream<wchar_t, char_traits<wchar_t> >::get(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::get(wchar_t*, long, wchar_t)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::read(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::seekg(long, _Ios_Seekdir)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::ignore(long, unsigned int)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::getline(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::getline(wchar_t*, long, wchar_t)(GLIBCXX_3.4) [1]
basic_istream<wchar_t, char_traits<wchar_t> >::readsomewchar_t*,



long)(GLIBCXX_3.4) [1]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t>>::~basic_istream()(GLIBCXX_3.4) [2]
virtual thunk to basic_istream<wchar_t, char_traits<wchar_t>>::~basic_istream()(GLIBCXX_3.4) [2]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

[2]. Itanium C++ ABI

**7.1.72 Class istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> >****7.1.72.1 Interfaces for Class istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> >**

No external methods are defined for libstdc++ - Class  
std::istreambuf\_iterator<wchar\_t, std::char\_traits<wchar\_t> >

**7.1.73 Class istreambuf\_iterator<char, char\_traits<char> >****7.1.73.1 Interfaces for Class istreambuf\_iterator<char, char\_traits<char> >**

No external methods are defined for libstdc++ - Class std::istreambuf\_iterator<char, std::char\_traits<char> >

**7.1.74 Class basic\_ostream<char, char\_traits<char> >****7.1.74.1 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 7-123

**Table 7-123 Primary vtable for basic\_ostream<char, char\_traits<char> >**

Base Offset	0
Virtual Base Offset	8
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 7-124 Secondary vtable for basic\_ostream<char, char\_traits<char> >**

Base Offset	-8
Virtual Base Offset	-8
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 7-125

**Table 7-125 VTT for basic\_ostream<char, char\_traits<char> >**

VTT Name	_ZTTS0
Number of Entries	2

#### 7.1.74.2 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 7-126, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-126 libstdc++ - Class basic\_ostream<char, char\_traits<char> > Function Interfaces**

basic_ostream<char, char_traits<char> >::seekp(long, _Ios_Seekdir)(GLIBCXX_3.4) [1]
basic_ostream<char, char_traits<char> >::write(char const*, long)(GLIBCXX_3.4) [1]
basic_ostream<char, char_traits<char> >::_M_write(char const*, long)(GLIBCXX_3.4) [1]
virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()(GLIBCXX_3.4) [2]
virtual thunk to basic_ostream<char, char_traits<char> >::~basic_ostream()(GLIBCXX_3.4) [2]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

[2]. Itanium C++ ABI

#### 7.1.75 Class basic\_ostream<wchar\_t, char\_traits<wchar\_t> >

##### 7.1.75.1 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 7-127

**Table 7-127 Primary vtable for basic\_ostream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	0
Virtual Base Offset	8

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 7-128 Secondary vtable for basic\_ostream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	-8
Virtual Base Offset	-8
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 7-129

**Table 7-129 VTT for basic\_ostream<wchar\_t, char\_traits<wchar\_t> >**

VTT Name	_ZTTSt13basic_ostreamIwSt11char_traitsIwEE
Number of Entries	2

### 7.1.75.2 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 7-130, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-130 libstdcxx - Class basic\_ostream<wchar\_t, char\_traits<wchar\_t> > Function Interfaces**

basic_ostream<wchar_t, char_traits<wchar_t> >::seekp(long, _Ios_Seekdir)(GLIBCXX_3.4) [1]
basic_ostream<wchar_t, char_traits<wchar_t> >::write(wchar_t const*, long)(GLIBCXX_3.4) [1]
virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >

>::~basic_ostream()(GLIBCXX_3.4) [2]
virtual thunk to basic_ostream<wchar_t, char_traits<wchar_t> >::~basic_ostream()(GLIBCXX_3.4) [2]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

[2]. Itanium C++ ABI

## 7.1.76 Class basic\_fstream<char, char\_traits<char> >

### 7.1.76.1 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 7-131

**Table 7-131 Primary vtable for basic\_fstream<char, char\_traits<char> >**

Base Offset	0
Virtual Base Offset	264
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 7-132 Secondary vtable for basic\_fstream<char, char\_traits<char> >**

Base Offset	-16
Virtual Base Offset	248
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 7-133 Secondary vtable for basic\_fstream<char, char\_traits<char> >**

Base Offset	-264
Virtual Base Offset	-264
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 7-134

**Table 7-134 VTT for basic\_fstream<char, char\_traits<char> >**

VTT Name	_ZTTSt13basic_fstreamIcSt11char_traitsIcEE
Number of Entries	10

### 7.1.76.2 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 7-135, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-135 libstdc++ - Class basic\_fstream<char, char\_traits<char> > Function Interfaces**

non-virtual thunk to basic_fstream<char, char_traits<char> >::~~basic_fstream()(GLIBCXX_3.4) [1]
non-virtual thunk to basic_fstream<char, char_traits<char> >::~~basic_fstream()(GLIBCXX_3.4) [1]
virtual thunk to basic_fstream<char, char_traits<char> >::~~basic_fstream()(GLIBCXX_3.4) [1]
virtual thunk to basic_fstream<char, char_traits<char> >::~~basic_fstream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.77 Class basic\_fstream<wchar\_t, char\_traits<wchar\_t> >

#### 7.1.77.1 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 7-136

**Table 7-136 Primary vtable for basic\_fstream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	0
Virtual Base Offset	264
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 7-137 Secondary vtable for basic\_fstream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	-16
Virtual Base Offset	248
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 7-138 Secondary vtable for basic\_fstream<wchar\_t, char\_traits<wchar\_t> >**

Base Offset	-264
Virtual Base Offset	-264
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 7-139

**Table 7-139 VTT for basic\_fstream<wchar\_t, char\_traits<wchar\_t> >**

VTT Name	_ZTTSt13basic_fstreamIwSt11char_traitsIwEE
Number of Entries	10

### 7.1.77.2 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 7-140, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-140 libstdcxx - Class `basic_fstream<wchar_t, char_traits<wchar_t> >` Function Interfaces**

non-virtual thunk to <code>basic_fstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~basic_fstream()</code> (GLIBCXX_3.4) [1]
non-virtual thunk to <code>basic_fstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_fstream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_fstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_fstream()</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.78 Class `basic_ifstream<char, char_traits<char> >`

#### 7.1.78.1 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 7-141

**Table 7-141 Primary vtable for `basic_ifstream<char, char_traits<char> >`**

Base Offset	0
Virtual Base Offset	256
RTTI	typeinfo for <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;</code>
vfunc[0]:	<code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_ifstream()</code>
vfunc[1]:	<code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_ifstream()</code>

**Table 7-142 Secondary vtable for `basic_ifstream<char, char_traits<char> >`**

Base Offset	-256
Virtual Base Offset	-256
RTTI	typeinfo for <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;</code>
vfunc[0]:	virtual thunk to <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_ifstream()</code>
vfunc[1]:	virtual thunk to <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~~basic_ifstream()</code>

The VTT for the `std::basic_ifstream<char, std::char_traits<char> >` class is described by Table 7-143

**Table 7-143 VTT for `basic_ifstream<char, char_traits<char> >`**

VTT Name	<code>_ZTTSt14basic_ifstreamIcSt11char_traitsIcEE</code>
Number of Entries	4

### 7.1.78.2 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 7-144, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-144 `libstdc++` - Class `basic_ifstream<char, char_traits<char> >` Function Interfaces**

virtual thunk to <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~basic_ifstream()(GLIBCXX_3.4)</code> [1]
virtual thunk to <code>basic_ifstream&lt;char, char_traits&lt;char&gt; &gt;::~basic_ifstream()(GLIBCXX_3.4)</code> [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.79 Class `basic_ifstream<wchar_t, char_traits<wchar_t> >`

#### 7.1.79.1 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 7-145

**Table 7-145 Primary vtable for `basic_ifstream<wchar_t, char_traits<wchar_t> >`**

Base Offset	0
Virtual Base Offset	256
RTTI	<code>typeinfo for basic_ifstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;</code>
<code>vfunc[0]:</code>	<code>basic_ifstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~basic_ifstream()</code>
<code>vfunc[1]:</code>	<code>basic_ifstream&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~basic_ifstream()</code>

**Table 7-146 Secondary vtable for `basic_ifstream<wchar_t, char_traits<wchar_t> >`**

Base Offset	-256
Virtual Base Offset	-256



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 7-147

**Table 7-147 VTT for basic\_ifstream<wchar\_t, char\_traits<wchar\_t> >**

VTT Name	_ZTTSt14basic_ifstreamIwSt11char_traitsIwEE
Number of Entries	4

### 7.1.79.2 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 7-148, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-148 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) [1]
virtual thunk to basic_ifstream<wchar_t, char_traits<wchar_t> >::~~basic_ifstream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.80 Class basic\_ofstream<char, char\_traits<char> >

#### 7.1.80.1 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 7-149

**Table 7-149 Primary vtable for basic\_ofstream<char, char\_traits<char> >**

Base Offset	0
Virtual Base Offset	248
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 7-150 Secondary vtable for basic\_ofstream<char, char\_traits<char> >**

Base Offset	-248
Virtual Base Offset	-248
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 7-151

**Table 7-151 VTT for basic\_ofstream<char, char\_traits<char> >**

VTT Name	_ZTTSt14basic_ofstreamIcSt11char_traitsIcEE
Number of Entries	4

### 7.1.80.2 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 7-152, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-152 libstdcxx - Class basic\_ofstream<char, char\_traits<char> > Function Interfaces**

virtual thunk to basic_ofstream<char, char_traits<char> >::~~basic_ofstream()(GLIBCXX_3.4) [1]
virtual thunk to basic_ofstream<char, char_traits<char> >::~~basic_ofstream()(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

### 7.1.81 Class `basic_ofstream<wchar_t, char_traits<wchar_t>>`

#### 7.1.81.1 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 7-153

**Table 7-153 Primary vtable for `basic_ofstream<wchar_t, char_traits<wchar_t>>`**

Base Offset	0
Virtual Base Offset	248
RTTI	typeinfo for <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	<code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~~basic_ofstream()</code>
vfunc[1]:	<code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~~basic_ofstream()</code>

**Table 7-154 Secondary vtable for `basic_ofstream<wchar_t, char_traits<wchar_t>>`**

Base Offset	-248
Virtual Base Offset	-248
RTTI	typeinfo for <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;</code>
vfunc[0]:	virtual thunk to <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~~basic_ofstream()</code>
vfunc[1]:	virtual thunk to <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~~basic_ofstream()</code>

The VTT for the `std::basic_ofstream<wchar_t, std::char_traits<wchar_t>>` class is described by Table 7-155

**Table 7-155 VTT for `basic_ofstream<wchar_t, char_traits<wchar_t>>`**

VTT Name	<code>_ZTTSt14basic_ofstreamIwSt11char_traitsIwEE</code>
Number of Entries	4

#### 7.1.81.2 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 7-156, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-156 libstdc++ - Class `basic_ofstream<wchar_t, char_traits<wchar_t>>` Function Interfaces**

virtual thunk to <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~basic_ofstream()</code> (GLIBCXX_3.4) [1]
virtual thunk to <code>basic_ofstream&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;::~basic_ofstream()</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

## 7.1.82 Class `basic_streambuf<char, char_traits<char>>`

### 7.1.82.1 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 7-157

**Table 7-157 Primary vtable for `basic_streambuf<char, char_traits<char>>`**

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

vfunc[7]:	basic_streambuf<char, char_traits<char> >::showmanyc()
vfunc[8]:	basic_streambuf<char, char_traits<char> >::xsgetn(char*, long)
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> >::xspn(char const*, long)
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 7-158

**Table 7-158 typeid for basic\_streambuf<char, char\_traits<char> >**

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

### 7.1.82.2 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 7-159, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-159 libstdc++ - Class basic\_streambuf<char, char\_traits<char> > Function Interfaces**

basic_streambuf<char, char_traits<char> >::pubseekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::sgetn(char*, long)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::spn(char const*, long)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::setbuf(char*, long)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::xsgetn(char*, long)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::xspn(char const*,

long)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]
basic_streambuf<char, char_traits<char> >::pubsetbuf(char*, long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.83 Class `basic_streambuf<wchar_t, char_traits<wchar_t> >`

#### 7.1.83.1 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 7-160

**Table 7-160 Primary vtable for `basic_streambuf<wchar_t, char_traits<wchar_t> >`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;</code>
vfunc[0]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_streambuf()</code>
vfunc[1]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::~~basic_streambuf()</code>
vfunc[2]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::imbue(locale const&amp;)</code>
vfunc[3]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::setbuf(wchar_t*, long)</code>
vfunc[4]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::seekoff(long, _Ios_Seekdir, _Ios_Openmode)</code>
vfunc[5]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::seekpos(fpos&lt;__mbstate_t&gt;, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::sync()</code>
vfunc[7]:	<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::showmanyc()</code>

vfunc[8]:	basic_streambuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, long)
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> >::xspn(wchar_t const*, long)
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 7-161

**Table 7-161 typeid for `basic_streambuf<wchar_t, char_traits<wchar_t> >`**

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

### 7.1.83.2 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 7-162, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-162 libstdc++ - Class `basic_streambuf<wchar_t, char_traits<wchar_t> >` Function Interfaces**

<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::pubseekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]</code>
<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::sgetn(wchar_t*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::sputn(wchar_t const*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::setbuf(wchar_t*, long)(GLIBCXX_3.4) [1]</code>
<code>basic_streambuf&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;::xsgetn(wchar_t*,</code>

long)(GLIBCXX_3.4) [1]
basic_streambuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, long)(GLIBCXX_3.4) [1]
basic_streambuf<wchar_t, char_traits<wchar_t> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pubsetbuf(wchar_t*, long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.84 Class `basic_filebuf<char, char_traits<char> >`

#### 7.1.84.1 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 7-163

**Table 7-163 Primary vtable for `basic_filebuf<char, char_traits<char> >`**

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



	>::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*, long)
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 7-164

**Table 7-164 typeid for basic\_filebuf<char, char\_traits<char> >**

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

#### 7.1.84.2 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 7-165, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-165 libstdc++ - Class basic\_filebuf<char, char\_traits<char> > Function Interfaces**

basic_filebuf<char, char_traits<char> >::M_set_buffer(long)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::M_convert_to_external(char*, long)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::setbuf(char*, long)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::xsgetn(char*, long)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::xsputn(char const*, long)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::M_seek(long, _Ios_Seekdir, __mbstate_t)(GLIBCXX_3.4) [1]
basic_filebuf<char, char_traits<char> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

**7.1.85 Class basic\_filebuf<wchar\_t, char\_traits<wchar\_t> >****7.1.85.1 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 7-166

**Table 7-166 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*, long)
vfunc[4]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::seekoff(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*, long)
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*, long)
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 7-167

**Table 7-167 typeid for basic\_filebuf<wchar\_t, char\_traits<wchar\_t> >**

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

### 7.1.85.2 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 7-168, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-168 libstdc++ - Class basic\_filebuf<wchar\_t, char\_traits<wchar\_t> > Function Interfaces**

basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_set_buffer(long)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_convert_to_external(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::setbuf(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::xsgetn(wchar_t*, long)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::xsputn(wchar_t const*, long)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::_M_seek(long, _Ios_Seekdir, __mbstate_t)(GLIBCXX_3.4) [1]
basic_filebuf<wchar_t, char_traits<wchar_t> >::seekoff(long, _Ios_Seekdir, _Ios_Openmode)(GLIBCXX_3.4) [1]
basic_ostream<wchar_t, char_traits<wchar_t> >::_M_write(wchar_t const*, long)(GLIBCXX_3.4) [1]
virtual thunk to basic_fstream<wchar_t, char_traits<wchar_t> >::~basic_fstream()(GLIBCXX_3.4) [2]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

[2]. Itanium C++ ABI

## 7.1.86 Class `ios_base`

### 7.1.86.1 Class data for `ios_base`

The Run Time Type Information for the `std::ios_base` class is described by Table 7-169

**Table 7-169** `typeinfo` for `ios_base`

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	<code>typeinfo</code> name for <code>ios_base</code>

### 7.1.86.2 Interfaces for Class `ios_base`

No external methods are defined for `libstdc++` - Class `std::ios_base`

## 7.1.87 Class `basic_ios<char, char_traits<char>>`

### 7.1.87.1 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 by Table 7-170

**Table 7-170** Primary vtable for `basic_ios<char, char_traits<char>>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>basic_ios&lt;char, char_traits&lt;char&gt;&gt;</code>
<code>vfunc[0]:</code>	<code>basic_ios&lt;char, char_traits&lt;char&gt;&gt;::~~basic_ios()</code>
<code>vfunc[1]:</code>	<code>basic_ios&lt;char, char_traits&lt;char&gt;&gt;::~~basic_ios()</code>

### 7.1.87.2 Interfaces for Class `basic_ios<char, char_traits<char>>`

No external methods are defined for `libstdc++` - Class `std::basic_ios<char, std::char_traits<char>>`

## 7.1.88 Class `basic_ios<wchar_t, char_traits<wchar_t>>`

### 7.1.88.1 Interfaces for Class `basic_ios<wchar_t, char_traits<wchar_t>>`

No external methods are defined for `libstdc++` - Class `std::basic_ios<wchar_t, std::char_traits<wchar_t>>`

## 7.1.89 Class ios\_base::failure

### 7.1.89.1 Class data for ios\_base::failure

The virtual table for the std::ios\_base::failure class is described by Table 7-171

**Table 7-171 Primary vtable for ios\_base::failure**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for ios_base::failure
vfunc[0]:	ios_base::failure::~~failure()
vfunc[1]:	ios_base::failure::~~failure()
vfunc[2]:	ios_base::failure::what() const

The Run Time Type Information for the std::ios\_base::failure class is described by Table 7-172

**Table 7-172 typeid for ios\_base::failure**

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

### 7.1.89.2 Interfaces for Class ios\_base::failure

No external methods are defined for libstdc++ - Class std::ios\_base::failure

## 7.1.90 Class \_\_timepunct<char>

### 7.1.90.1 Class data for \_\_timepunct<char>

The virtual table for the std::\_\_timepunct<char> class is described by Table 7-173

**Table 7-173 Primary vtable for \_\_timepunct<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for __timepunct<char>
vfunc[0]:	__timepunct<char>::~~__timepunct()
vfunc[1]:	__timepunct<char>::~~__timepunct()

The Run Time Type Information for the std::\_\_timepunct<char> class is described by Table 7-174

**Table 7-174 typeid for \_\_timepunct<char>**

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

### 7.1.90.2 Interfaces for Class `__timepunct<char>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::__timepunct<char>` specified in Table 7-175, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-175 libstdcxx - Class `__timepunct<char>` Function Interfaces**

<code>__timepunct&lt;char&gt;::__M_put(char*, unsigned long, char const*, tm const*)</code> const(GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(__locale_struct*, char const*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(__timepunct_cache&lt;char&gt;*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(__locale_struct*, char const*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(__timepunct_cache&lt;char&gt;*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>__timepunct&lt;char&gt;::__timepunct(unsigned long)</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.91 Class `__timepunct<wchar_t>`

#### 7.1.91.1 Class data for `__timepunct<wchar_t>`

The virtual table for the `std::__timepunct<wchar_t>` class is described by Table 7-176

**Table 7-176 Primary vtable for `__timepunct<wchar_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__timepunct&lt;wchar_t&gt;</code>
vfunc[0]:	<code>__timepunct&lt;wchar_t&gt;::~~__timepunct()</code>
vfunc[1]:	<code>__timepunct&lt;wchar_t&gt;::~~__timepunct()</code>

The Run Time Type Information for the `std::__timepunct<wchar_t>` class is described by Table 7-177

**Table 7-177 typeinfo for `__timepunct<wchar_t>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
-------------	---

Name	typeinfo name for __timepunct<wchar_t>
------	---

### 7.1.91.2 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 7-178, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-178 libstdcxx - Class \_\_timepunct<wchar\_t> Function Interfaces**

__timepunct<wchar_t>::__M_put(wchar_t*, unsigned long, wchar_t const*, tm const*) const(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(__timepunct_cache<wchar_t>*, unsigned long)(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(unsigned long)(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(__timepunct_cache<wchar_t>*, unsigned long)(GLIBCXX_3.4) [1]
__timepunct<wchar_t>::__timepunct(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.92 Class messages\_base

### 7.1.92.1 Class data for messages\_base

The Run Time Type Information for the std::messages\_base class is described by Table 7-179

**Table 7-179 typeinfo for messages\_base**

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

### 7.1.92.2 Interfaces for Class messages\_base

No external methods are defined for libstdcxx - Class std::messages\_base

## 7.1.93 Class messages<char>

### 7.1.93.1 Class data for messages<char>

The virtual table for the std::messages<char> class is described by Table 7-180

**Table 7-180 Primary vtable for messages<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for messages<char>
vfunc[0]:	messages<char>::~~messages()
vfunc[1]:	messages<char>::~~messages()
vfunc[2]:	messages<char>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const
vfunc[3]:	messages<char>::do_get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const
vfunc[4]:	messages<char>::do_close(int) const

**7.1.93.2 Interfaces for Class messages<char>**

An LSB conforming implementation shall provide the architecture specific methods for Class std::messages<char> specified in Table 7-181, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-181 libstdc++ - Class messages<char> Function Interfaces**

messages<char>::messages(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
messages<char>::messages(unsigned long)(GLIBCXX_3.4) [1]
messages<char>::messages(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
messages<char>::messages(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

**7.1.94 Class messages<wchar\_t>****7.1.94.1 Class data for messages<wchar\_t>**

The virtual table for the std::messages<wchar\_t> class is described by Table 7-182

**Table 7-182 Primary vtable for messages<wchar\_t>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for messages<wchar_t>
vfunc[0]:	messages<wchar_t>::~~messages()



vfunc[1]:	messages<wchar_t>::~messages()
vfunc[2]:	messages<wchar_t>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const
vfunc[3]:	messages<wchar_t>::do_get(int, int, int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const
vfunc[4]:	messages<wchar_t>::do_close(int) const

### 7.1.94.2 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 7-183, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-183 libstdcxx - Class messages<wchar\_t> Function Interfaces**

messages<wchar_t>::messages(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
messages<wchar_t>::messages(unsigned long)(GLIBCXX_3.4) [1]
messages<wchar_t>::messages(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
messages<wchar_t>::messages(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.95 Class messages\_byname<char>

#### 7.1.95.1 Class data for messages\_byname<char>

The virtual table for the std::messages\_byname<char> class is described by Table 7-184

**Table 7-184 Primary vtable for messages\_byname<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for messages_byname<char>
vfunc[0]:	messages_byname<char>::~messages_byname()
vfunc[1]:	messages_byname<char>::~messages_byname()
vfunc[2]:	messages<char>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const

	allocator<char> > const&, locale const&) const
vfunc[3]:	messages<char>::do_get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const
vfunc[4]:	messages<char>::do_close(int) const

The Run Time Type Information for the `std::messages_byname<char>` class is described by Table 7-185

**Table 7-185 typeid for `messages_byname<char>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>messages_byname&lt;char&gt;</code>

### 7.1.95.2 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 7-186, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-186 libstdc++ - Class `messages_byname<char>` Function Interfaces**

<code>messages_byname&lt;char&gt;::messages_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>messages_byname&lt;char&gt;::messages_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.96 Class `messages_byname<wchar_t>`

#### 7.1.96.1 Class data for `messages_byname<wchar_t>`

The virtual table for the `std::messages_byname<wchar_t>` class is described by Table 7-187

**Table 7-187 Primary vtable for `messages_byname<wchar_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>messages_byname&lt;wchar_t&gt;</code>
vfunc[0]:	<code>messages_byname&lt;wchar_t&gt;::~~messages_byname()</code>
vfunc[1]:	<code>messages_byname&lt;wchar_t&gt;::~~messages_byname()</code>

vfunc[2]:	messages<wchar_t>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const
vfunc[3]:	messages<wchar_t>::do_get(int, int, int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const
vfunc[4]:	messages<wchar_t>::do_close(int) const

The Run Time Type Information for the std::messages\_byname<wchar\_t> class is described by Table 7-188

**Table 7-188 typeid for messages\_byname<wchar\_t>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for messages_byname<wchar_t>

### 7.1.96.2 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 7-189, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-189 libstdc++ - Class messages\_byname<wchar\_t> Function Interfaces**

messages_byname<wchar_t>::messages_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
messages_byname<wchar_t>::messages_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.97 Class numpunct<char>

#### 7.1.97.1 Class data for numpunct<char>

The virtual table for the std::numpunct<char> class is described by Table 7-190

**Table 7-190 Primary vtable for numpunct<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for numpunct<char>
vfunc[0]:	numpunct<char>::~~numpunct()
vfunc[1]:	numpunct<char>::~~numpunct()

vfunc[2]:	numpunct<char>::do_decimal_point() const
vfunc[3]:	numpunct<char>::do_thousands_sep() const
vfunc[4]:	numpunct<char>::do_grouping() const
vfunc[5]:	numpunct<char>::do_truename() const
vfunc[6]:	numpunct<char>::do_falsename() const

The Run Time Type Information for the std::numpunct<char> class is described by Table 7-191

**Table 7-191 typeid for numpunct<char>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for numpunct<char>

### 7.1.97.2 Interfaces for Class numpunct<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::numpunct<char> specified in Table 7-192, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-192 libstdc++ - Class numpunct<char> Function Interfaces**

numpunct<char>::numpunct(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
numpunct<char>::numpunct(__numpunct_cache<char>*, unsigned long)(GLIBCXX_3.4) [2]
numpunct<char>::numpunct(unsigned long)(GLIBCXX_3.4) [2]
numpunct<char>::numpunct(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
numpunct<char>::numpunct(__numpunct_cache<char>*, unsigned long)(GLIBCXX_3.4) [2]
numpunct<char>::numpunct(unsigned long)(GLIBCXX_3.4) [2]

*Referenced Specification(s)*

[1]. Itanium C++ ABI

[2]. ISO/IEC 14882: 2003 C++ Language

### 7.1.98 Class numpunct<wchar\_t>

#### 7.1.98.1 Class data for numpunct<wchar\_t>

The virtual table for the std::numpunct<wchar\_t> class is described by Table 7-193

**Table 7-193 Primary vtable for numpunct<wchar\_t>**

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeinfo for numpunct<wchar_t>
vfunc[0]:	numpunct<wchar_t>::~~numpunct()
vfunc[1]:	numpunct<wchar_t>::~~numpunct()
vfunc[2]:	numpunct<wchar_t>::~do_decimal_point() const
vfunc[3]:	numpunct<wchar_t>::~do_thousands_sep() const
vfunc[4]:	numpunct<wchar_t>::~do_grouping() const
vfunc[5]:	numpunct<wchar_t>::~do_truename() const
vfunc[6]:	numpunct<wchar_t>::~do_falsename() const

The Run Time Type Information for the `std::numpunct<wchar_t>` class is described by Table 7-194

**Table 7-194 typeinfo for numpunct<wchar\_t>**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>numpunct&lt;wchar_t&gt;</code>

### 7.1.98.2 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 7-195, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-195 libstdcxx - Class `numpunct<wchar_t>` Function Interfaces**

<code>numpunct&lt;wchar_t&gt;::numpunct(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>numpunct&lt;wchar_t&gt;::numpunct(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>numpunct&lt;wchar_t&gt;::numpunct(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>numpunct&lt;wchar_t&gt;::numpunct(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.99 Class `numpunct_byname<char>`

### 7.1.99.1 Class data for `numpunct_byname<char>`

The virtual table for the `std::numpunct_byname<char>` class is described by Table 7-196

**Table 7-196 Primary vtable for `numpunct_byname<char>`**

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeid</code> for <code>numpunct_byname&lt;char&gt;</code>
<code>vfunc[0]:</code>	<code>numpunct_byname&lt;char&gt;::~~numpunct_byname()</code>
<code>vfunc[1]:</code>	<code>numpunct_byname&lt;char&gt;::~~numpunct_byname()</code>
<code>vfunc[2]:</code>	<code>numpunct&lt;char&gt;::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>numpunct&lt;char&gt;::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>numpunct&lt;char&gt;::do_grouping() const</code>
<code>vfunc[5]:</code>	<code>numpunct&lt;char&gt;::do_truename() const</code>
<code>vfunc[6]:</code>	<code>numpunct&lt;char&gt;::do_falsename() const</code>

The Run Time Type Information for the `std::numpunct_byname<char>` class is described by Table 7-197

**Table 7-197 `typeid` for `numpunct_byname<char>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	<code>typeid</code> name for <code>numpunct_byname&lt;char&gt;</code>

### 7.1.99.2 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 7-198, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-198 `libstdcxx` - Class `numpunct_byname<char>` Function Interfaces**

<code>numpunct_byname&lt;char&gt;::numpunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>numpunct_byname&lt;char&gt;::numpunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.100 Class `numpunct_byname<wchar_t>`

### 7.1.100.1 Class data for `numpunct_byname<wchar_t>`

The virtual table for the `std::numpunct_byname<wchar_t>` class is described by Table 7-199

**Table 7-199 Primary vtable for `numpunct_byname<wchar_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>numpunct_byname&lt;wchar_t&gt;</code>
<code>vfunc[0]:</code>	<code>numpunct_byname&lt;wchar_t&gt;::~~numpunct_byname()</code>
<code>vfunc[1]:</code>	<code>numpunct_byname&lt;wchar_t&gt;::~~numpunct_byname()</code>
<code>vfunc[2]:</code>	<code>numpunct&lt;wchar_t&gt;::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>numpunct&lt;wchar_t&gt;::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>numpunct&lt;wchar_t&gt;::do_grouping() const</code>
<code>vfunc[5]:</code>	<code>numpunct&lt;wchar_t&gt;::do_truename() const</code>
<code>vfunc[6]:</code>	<code>numpunct&lt;wchar_t&gt;::do_falsename() const</code>

The Run Time Type Information for the `std::numpunct_byname<wchar_t>` class is described by Table 7-200

**Table 7-200 typeinfo for `numpunct_byname<wchar_t>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>numpunct_byname&lt;wchar_t&gt;</code>

### 7.1.100.2 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 7-201, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-201 libstdc++ - Class `numpunct_byname<wchar_t>` Function Interfaces**

<code>numpunct_byname&lt;wchar_t&gt;::numpunct_byname(char const*, unsigned</code>
--

long)(GLIBCXX_3.4) [1]
------------------------

numpunct_byname<wchar_t>::numpunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
--

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### **7.1.101 Class `__codecvt_abstract_base<char, char, __mbstate_t>`**

#### **7.1.101.1 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>`

### **7.1.102 Class `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`**

#### **7.1.102.1 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 by Table 7-202

**Table 7-202 Primary vtable for `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>__codecvt_abstract_base&lt;wchar_t, char, __mbstate_t&gt;</code>
vfunc[0]:	
vfunc[1]:	
vfunc[2]:	<code>__cxa_pure_virtual</code>
vfunc[3]:	<code>__cxa_pure_virtual</code>
vfunc[4]:	<code>__cxa_pure_virtual</code>
vfunc[5]:	<code>__cxa_pure_virtual</code>
vfunc[6]:	<code>__cxa_pure_virtual</code>
vfunc[7]:	<code>__cxa_pure_virtual</code>
vfunc[8]:	<code>__cxa_pure_virtual</code>

#### **7.1.102.2 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>`



### 7.1.103 Class `codecvt_base`

#### 7.1.103.1 Class data for `codecvt_base`

The Run Time Type Information for the `std::codecvt_base` class is described by Table 7-203

**Table 7-203** `typeinfo` for `codecvt_base`

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	<code>typeinfo</code> name for <code>codecvt_base</code>

#### 7.1.103.2 Interfaces for Class `codecvt_base`

No external methods are defined for `libstdc++` - Class `std::codecvt_base`

### 7.1.104 Class `codecvt<char, char, __mbstate_t>`

#### 7.1.104.1 Class data for `codecvt<char, char, __mbstate_t>`

The virtual table for the `std::codecvt<char, char, __mbstate_t>` class is described by Table 7-204

**Table 7-204** Primary vtable for `codecvt<char, char, __mbstate_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>codecvt&lt;char, char, __mbstate_t&gt;</code>
<code>vfunc[0]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::~~codecvt()</code>
<code>vfunc[1]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::~~codecvt()</code>
<code>vfunc[2]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_out(__mbstate_t&amp;, char const*, char const*, char const*&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[3]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_unshift(__mbstate_t&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[4]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_in(__mbstate_t&amp;, char const*, char const*, char const*&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[5]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_encoding() const</code>
<code>vfunc[6]:</code>	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_always_noconv() const</code>

vfunc[7]:	codecvt<char, char, __mbstate_t>::do_length(__mbstate_t&, char const*, char const*, unsigned long) 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 7-205

**Table 7-205 typeid for codecvt<char, char, \_\_mbstate\_t>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for codecvt<char, char, __mbstate_t>

#### 7.1.104.2 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 by Table 7-206

**Table 7-206 Primary vtable for \_\_codecvt\_abstract\_base<char, char, \_\_mbstate\_t>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for __codecvt_abstract_base<char, char, __mbstate_t>
vfunc[0]:	
vfunc[1]:	
vfunc[2]:	__cxa_pure_virtual
vfunc[3]:	__cxa_pure_virtual
vfunc[4]:	__cxa_pure_virtual
vfunc[5]:	__cxa_pure_virtual
vfunc[6]:	__cxa_pure_virtual
vfunc[7]:	__cxa_pure_virtual
vfunc[8]:	__cxa_pure_virtual

#### 7.1.104.3 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 7-207, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-207 libstdc++ - Class `codecvt<char, char, __mbstate_t>` Function Interfaces**

<code>codecvt&lt;char, char, __mbstate_t&gt;::do_length(__mbstate_t&amp;, char const*, char const*, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;char, char, __mbstate_t&gt;::codecvt(__locale_struct*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;char, char, __mbstate_t&gt;::codecvt(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;char, char, __mbstate_t&gt;::codecvt(__locale_struct*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;char, char, __mbstate_t&gt;::codecvt(unsigned long)</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### **7.1.105 Class `codecvt<wchar_t, char, __mbstate_t>`**

#### **7.1.105.1 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 7-208

**Table 7-208 Primary vtable for `codecvt<wchar_t, char, __mbstate_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>codecvt&lt;wchar_t, char, __mbstate_t&gt;</code>
<code>vfunc[0]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::~~codecvt()</code>
<code>vfunc[1]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::~~codecvt()</code>
<code>vfunc[2]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_out(__mbstate_t&amp;, wchar_t const*, wchar_t const*, wchar_t const*&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[3]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_unshift(__mbstate_t&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[4]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_in(__mbstate_t&amp;, char const*, char const*, char const*&amp;, wchar_t*, wchar_t*, wchar_t*&amp;) const</code>
<code>vfunc[5]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_encoding() const</code>
<code>vfunc[6]:</code>	<code>codecvt&lt;wchar_t, char,</code>

	<code>__mbstate_t::do_always_noconv()</code> const
<code>vfunc[7]:</code>	<code>codecvt&lt;wchar_t, char,</code> <code>__mbstate_t::do_length(__mbstate_t&amp;</code> <code>, char const*, char const*, unsigned</code> <code>long) const</code>
<code>vfunc[8]:</code>	<code>codecvt&lt;wchar_t, char,</code> <code>__mbstate_t::do_max_length() const</code>

The Run Time Type Information for the `std::codecvt<wchar_t, char, __mbstate_t>` class is described by Table 7-209

**Table 7-209 typeid for `codecvt<wchar_t, char, __mbstate_t>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>codecvt&lt;wchar_t,</code> <code>char, __mbstate_t&gt;</code>

### 7.1.105.2 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 7-210, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-210 libstdc++ - Class `codecvt<wchar_t, char, __mbstate_t>` Function Interfaces**

<code>codecvt&lt;wchar_t, char, __mbstate_t::do_length(__mbstate_t&amp;, char const*, char const*, unsigned long) const</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;wchar_t, char, __mbstate_t::codecvt(__locale_struct*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;wchar_t, char, __mbstate_t::codecvt(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;wchar_t, char, __mbstate_t::codecvt(__locale_struct*, unsigned long)</code> (GLIBCXX_3.4) [1]
<code>codecvt&lt;wchar_t, char, __mbstate_t::codecvt(unsigned long)</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.106 Class `codecvt_byname<char, char, __mbstate_t>`

#### 7.1.106.1 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 7-211

**Table 7-211 Primary vtable for `codecvt_byname<char, char, __mbstate_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>codecvt_byname&lt;char, char, __mbstate_t&gt;</code>
vfunc[0]:	<code>codecvt_byname&lt;char, char, __mbstate_t&gt;::~~codecvt_byname()</code>
vfunc[1]:	<code>codecvt_byname&lt;char, char, __mbstate_t&gt;::~~codecvt_byname()</code>
vfunc[2]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_out(__mbstate_t&amp;, char const*, char const*, char const*&amp;, char*, char*, char*&amp;) const</code>
vfunc[3]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_unshift(__mbstate_t&amp;, char*, char*, char*&amp;) const</code>
vfunc[4]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_in(__mbstate_t&amp;, char const*, char const*, char const*&amp;, char*, char*, char*&amp;) const</code>
vfunc[5]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_encoding() const</code>
vfunc[6]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_always_noconv() const</code>
vfunc[7]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_length(__mbstate_t&amp;, char const*, char const*, unsigned long) const</code>
vfunc[8]:	<code>codecvt&lt;char, char, __mbstate_t&gt;::do_max_length() const</code>

The Run Time Type Information for the `std::codecvt_byname<char, char, __mbstate_t>` class is described by Table 7-212

**Table 7-212 typeinfo for `codecvt_byname<char, char, __mbstate_t>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>codecvt_byname&lt;char, char, __mbstate_t&gt;</code>

### 7.1.106.2 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 7-213, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-213 `libstdcxx` - Class `codecvt_byname<char, char, __mbstate_t>` Function Interfaces**

<code>codecvt_byname&lt;char, char, __mbstate_t&gt;::codecvt_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>codecvt_byname&lt;char, char, __mbstate_t&gt;::codecvt_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.107 Class `codecvt_byname<wchar_t, char, __mbstate_t>`

#### 7.1.107.1 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 7-214

**Table 7-214 Primary vtable for `codecvt_byname<wchar_t, char, __mbstate_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>codecvt_byname&lt;wchar_t, char, __mbstate_t&gt;</code>
<code>vfunc[0]:</code>	<code>codecvt_byname&lt;wchar_t, char, __mbstate_t&gt;::~~codecvt_byname()</code>
<code>vfunc[1]:</code>	<code>codecvt_byname&lt;wchar_t, char, __mbstate_t&gt;::~~codecvt_byname()</code>
<code>vfunc[2]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_out(__mbstate_t&amp;, wchar_t const*, wchar_t const*, wchar_t const*&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[3]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_unshift(__mbstate_t&amp;, char*, char*, char*&amp;) const</code>
<code>vfunc[4]:</code>	<code>codecvt&lt;wchar_t, char, __mbstate_t&gt;::do_in(__mbstate_t&amp;, char const*, char const*, char const*&amp;, wchar_t*, wchar_t*, wchar_t*&amp;) const</code>
<code>vfunc[5]:</code>	<code>codecvt&lt;wchar_t, char,</code>

	__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 long) 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 7-215

**Table 7-215 typeid for `codecvt_byname<wchar_t, char, __mbstate_t>`**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for <code>codecvt_byname&lt;wchar_t, char, __mbstate_t&gt;</code>

### 7.1.107.2 Class data for `collate_byname<wchar_t>`

The virtual table for the `std::collate_byname<wchar_t>` class is described by Table 7-216

**Table 7-216 Primary vtable for `collate_byname<wchar_t>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>collate_byname&lt;wchar_t&gt;</code>
vfunc[0]:	<code>collate_byname&lt;wchar_t&gt;::~~collate_by name()</code>
vfunc[1]:	<code>collate_byname&lt;wchar_t&gt;::~~collate_by name()</code>
vfunc[2]:	<code>collate&lt;wchar_t&gt;::do_compare(wchar_ t const*, wchar_t const*, wchar_t const*, wchar_t const*) const</code>
vfunc[3]:	<code>collate&lt;wchar_t&gt;::do_transform(wchar_ _t const*, wchar_t const*) const</code>
vfunc[4]:	<code>collate&lt;wchar_t&gt;::do_hash(wchar_t const*, wchar_t const*) const</code>

The Run Time Type Information for the `std::collate_byname<wchar_t>` class is described by Table 7-217

**Table 7-217 typeid for collate\_byname<wchar\_t>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for collate_byname<wchar_t>

### 7.1.107.3 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 7-218, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-218 libstdc++ - Class codecvt\_byname<wchar\_t, char, \_\_mbstate\_t> Function Interfaces**

codecvt_byname<wchar_t, char, __mbstate_t>::codecvt_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
codecvt_byname<wchar_t, char, __mbstate_t>::codecvt_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
collate_byname<wchar_t>::collate_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
collate_byname<wchar_t>::collate_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.108 Class collate<char>

### 7.1.108.1 Class data for collate<char>

The virtual table for the std::collate<char> class is described by Table 7-219

**Table 7-219 Primary vtable for collate<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for collate<char>
vfunc[0]:	collate<char>::~~collate()
vfunc[1]:	collate<char>::~~collate()
vfunc[2]:	collate<char>::do_compare(char const*, char const*, char const*) const
vfunc[3]:	collate<char>::do_transform(char const*, char const*) const



vfunc[4]:	collate<char>::do_hash(char const*, char const*) const
-----------	--

The Run Time Type Information for the std::collate<char> class is described by Table 7-220

**Table 7-220 typeinfo for collate<char>**

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

### 7.1.108.2 Interfaces for Class collate<char>

An LSB conforming implementation shall provide the architecture specific methods for Class std::collate<char> specified in Table 7-221, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-221 libstdcxx - Class collate<char> Function Interfaces**

collate<char>::_M_transform(char*, char const*, unsigned long) const(GLIBCXX_3.4) [1]
collate<char>::collate(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
collate<char>::collate(unsigned long)(GLIBCXX_3.4) [1]
collate<char>::collate(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
collate<char>::collate(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.109 Class collate<wchar\_t>

#### 7.1.109.1 Class data for collate<wchar\_t>

The virtual table for the std::collate<wchar\_t> class is described by Table 7-222

**Table 7-222 Primary vtable for collate<wchar\_t>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for collate<wchar_t>
vfunc[0]:	collate<wchar_t>::~~collate()
vfunc[1]:	collate<wchar_t>::~~collate()
vfunc[2]:	collate<wchar_t>::do_compare(wchar_t const*, wchar_t const*, wchar_t const*, wchar_t const*) const
vfunc[3]:	collate<wchar_t>::do_transform(wchar_t const*, wchar_t const*) const

vfunc[4]:	collate<wchar_t>::do_hash(wchar_t const*, wchar_t const*) const
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The Run Time Type Information for the std::collate<wchar\_t> class is described by Table 7-223

**Table 7-223 typeinfo for collate<wchar\_t>**

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

### 7.1.109.2 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 7-224, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-224 libstdcxx - Class collate<wchar\_t> Function Interfaces**

collate<wchar_t>::M_transform(wchar_t*, wchar_t const*, unsigned long) const(GLIBCXX_3.4) [1]
collate<wchar_t>::collate(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
collate<wchar_t>::collate(unsigned long)(GLIBCXX_3.4) [1]
collate<wchar_t>::collate(__locale_struct*, unsigned long)(GLIBCXX_3.4) [1]
collate<wchar_t>::collate(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.110 Class collate\_byname<char>

#### 7.1.110.1 Class data for collate\_byname<char>

The virtual table for the std::collate\_byname<char> class is described by Table 7-225

**Table 7-225 Primary vtable for collate\_byname<char>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for collate_byname<char>
vfunc[0]:	collate_byname<char>::~~collate_byname()
vfunc[1]:	collate_byname<char>::~~collate_byname()
vfunc[2]:	collate<char>::do_compare(char const*, char const*, char const*, char const*) const

vfunc[3]:	collate<char>::do_transform(char const*, char const*) const
vfunc[4]:	collate<char>::do_hash(char const*, char const*) const

The Run Time Type Information for the std::collate\_byname<char> class is described by Table 7-226

**Table 7-226 typeid for collate\_byname<char>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for collate_byname<char>

### 7.1.110.2 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 7-227, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-227 libstdc++ - Class collate\_byname<char> Function Interfaces**

collate_byname<char>::collate_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
collate_byname<char>::collate_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.111 Class collate\_byname<wchar\_t>

#### 7.1.111.1 Interfaces for Class collate\_byname<wchar\_t>

No external methods are defined for libstdc++ - Class std::collate\_byname<wchar\_t>

### 7.1.112 Class time\_base

#### 7.1.112.1 Class data for time\_base

The Run Time Type Information for the std::time\_base class is described by Table 7-228

**Table 7-228 typeid for time\_base**

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeid name for time_base

**7.1.112.2 Interfaces for Class time\_base**

No external methods are defined for libstdc++ - Class std::time\_base

**7.1.113 Class time\_get\_byname<char, istreambuf\_iterator<char, char\_traits<char>>>****7.1.113.1 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 by Table 7-229

**Table 7-229 Primary vtable for time\_get\_byname<char, istreambuf\_iterator<char, char\_traits<char>>>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>
vfunc[0]:	time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>::~~time_get_byname()
vfunc[1]:	time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>::~~time_get_byname()
vfunc[2]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::do_date_order() const
vfunc[3]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::do_get_time(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const
vfunc[4]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::do_get_date(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const
vfunc[5]:	time_get<char,

	istreambuf_iterator<char, char_traits<char> > >::do_get_weekday(istreambuf_iterato r<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_monthname(istreambuf_iter ator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_year(istreambuf_iterator<ch ar, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const

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 7-230

**Table 7-230 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> > >

#### 7.1.113.2 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 7-231, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-231 libstdc++ - Class `time_get_byname<char, istreambuf_iterator<char, char_traits<char> > >` Function Interfaces**

<code>time_get_byname&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::time_get_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>time_get_byname&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt;</code>

>::time_get_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
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Referenced Specification(s)

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.114 Class `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

#### 7.1.114.1 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 by Table 7-232

**Table 7-232 Primary vtable for `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_get_byname&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code>
vfunc[0]:	<code>time_get_byname&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::~~time_get_byname()</code>
vfunc[1]:	<code>time_get_byname&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::~~time_get_byname()</code>
vfunc[2]:	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::do_date_order() const</code>
vfunc[3]:	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::do_get_time(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, ios_base&amp;, _Ios_ostate&amp;, tm*) const</code>
vfunc[4]:	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::do_get_date(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;,</code>

	istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[5]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_weekday(istreambuf_iterato r<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_monthname(istreambuf_iter ator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_year(istreambuf_iterator<wc har_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const

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 7-233

**Table 7-233** 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> > >

#### 7.1.114.2 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 7-234, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-234 libstdcxx - Class `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>` Function Interfaces**

<code>time_get_byname&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::time_get_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>time_get_byname&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::time_get_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.115 Class `time_put_byname<char, ostreambuf_iterator<char, char_traits<char>>>`

#### 7.1.115.1 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 by Table 7-235

**Table 7-235 Primary vtable for `time_put_byname<char, ostreambuf_iterator<char, char_traits<char>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for time_put_byname&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;</code>
<code>vfunc[0]:</code>	<code>time_put_byname&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::~~time_put_byname()</code>
<code>vfunc[1]:</code>	<code>time_put_byname&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::~~time_put_byname()</code>
<code>vfunc[2]:</code>	<code>time_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::do_put(ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, ios_base&amp;, char, tm const*, char, char) const</code>

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 7-236



**Table 7-236 typeid for time\_put\_byname<char, ostreambuf\_iterator<char, char\_traits<char>>>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for time_put_byname<char, ostreambuf_iterator<char, char_traits<char>>>

### 7.1.115.2 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 7-237, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-237 libstdc++ - 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 long)(GLIBCXX_3.4) [1]
time_put_byname<char, ostreambuf_iterator<char, char_traits<char>>> >::time_put_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.116 Class time\_put\_byname<wchar\_t, ostreambuf\_iterator<wchar\_t, char\_traits<wchar\_t>>>

#### 7.1.116.1 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 by Table 7-238

**Table 7-238 Primary vtable for time\_put\_byname<wchar\_t, ostreambuf\_iterator<wchar\_t, char\_traits<wchar\_t>>>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>
vfunc[0]:	time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

	>::~time_put_byname()
vfunc[1]:	time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > > >::~time_put_byname()
vfunc[2]:	time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > > >::do_put(ostreambuf_iterator<wchar_ t, char_traits<wchar_t> >, ios_base&, wchar_t, tm const*, char, char) const

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 7-239

**Table 7-239 typeid for `time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>time_put_byname&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;</code>

#### 7.1.116.2 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 7-240, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-240 libstdc++ - Class `time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >` Function Interfaces**

<code>time_put_byname&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::time_put_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>time_put_byname&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::time_put_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.117 Class `time_get<char, istreambuf_iterator<char, char_traits<char>>>`

#### 7.1.117.1 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 by Table 7-241

**Table 7-241 Primary vtable for `time_get<char, istreambuf_iterator<char, char_traits<char>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;</code>
<code>vfunc[0]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::~~time_get()</code>
<code>vfunc[1]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::~~time_get()</code>
<code>vfunc[2]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::do_date_order() const</code>
<code>vfunc[3]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::do_get_time(istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, ios_base&amp;, _Ios_Iostate&amp;, tm*) const</code>
<code>vfunc[4]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::do_get_date(istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, ios_base&amp;, _Ios_Iostate&amp;, tm*) const</code>
<code>vfunc[5]:</code>	<code>time_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;::do_get_weekday(istreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;, istreambuf_iterator&lt;char,</code>

	char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_monthname(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_year(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const

#### 7.1.117.2 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 7-242, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-242 libstdcxx - Class time\_get<char, istreambuf\_iterator<char, char\_traits<char> > > Function Interfaces**

time_get<char, istreambuf_iterator<char, char_traits<char> > >::M_extract_num(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, int&, int, int, unsigned long, ios_base&, _Ios_Iostate&) const(GLIBCXX_3.4) [1]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::M_extract_name(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, int&, char const**, unsigned long, ios_base&, _Ios_Iostate&) const(GLIBCXX_3.4) [1]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::time_get(unsigned long)(GLIBCXX_3.4) [1]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::time_get(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.118 Class `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

#### 7.1.118.1 Class data for `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

The virtual table for the `std::time_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by Table 7-243

**Table 7-243 Primary vtable for `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code>
<code>vfunc[0]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~~time_get()</code>
<code>vfunc[1]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~~time_get()</code>
<code>vfunc[2]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_date_order() const</code>
<code>vfunc[3]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_get_time(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, ios_base&amp;, _Ios_Iostate&amp;, tm*) const</code>
<code>vfunc[4]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_get_date(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, ios_base&amp;, _Ios_Iostate&amp;, tm*) const</code>
<code>vfunc[5]:</code>	<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_get_weekday(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t,</code>

	char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_monthname(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_year(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const

### 7.1.118.2 Interfaces for Class `time_get<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<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` specified in Table 7-244, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-244 libstdcxx - Class `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >` Function Interfaces**

<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::M_extract_num(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;, int&amp;, int, int, unsigned long, ios_base&amp;, _Ios_Iostate&amp;) const</code> (GLIBCXX_3.4) [1]
<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::M_extract_name(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt;, int&amp;, wchar_t const**, unsigned long, ios_base&amp;, _Ios_Iostate&amp;) const</code> (GLIBCXX_3.4) [1]
<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::time_get(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>time_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::time_get(unsigned long)</code> (GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.119 Class `time_put<char, ostreambuf_iterator<char, char_traits<char>>>`

#### 7.1.119.1 Interfaces for Class `time_put<char, ostreambuf_iterator<char, char_traits<char>>>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::time_put<char, std::ostreambuf_iterator<char, std::char_traits<char>>>` specified in Table 7-245, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-245 libstdcxx - Class `time_put<char, ostreambuf_iterator<char, char_traits<char>>>` Function Interfaces**

<code>time_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;</code> <code>&gt;::time_put(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>time_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt;&gt;&gt;</code> <code>&gt;::time_put(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.120 Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

#### 7.1.120.1 Interfaces for Class `time_put<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<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` specified in Table 7-246, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-246 libstdcxx - Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>` Function Interfaces**

<code>time_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::time_put(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>time_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code> <code>&gt;::time_put(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.121 Class `money_punct<char, false>`

#### 7.1.121.1 Class data for `money_punct<char, false>`

The virtual table for the `std::money_punct<char, false>` class is described by Table 7-247

**Table 7-247 Primary vtable for `money_punct<char, false>`**

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeid for money_punct<char, false>
vfunc[0]:	money_punct<char, false>::~~money_punct()
vfunc[1]:	money_punct<char, false>::~money_punct()
vfunc[2]:	money_punct<char, false>::~do_decimal_point() const
vfunc[3]:	money_punct<char, false>::~do_thousands_sep() const
vfunc[4]:	money_punct<char, false>::~do_grouping() const
vfunc[5]:	money_punct<char, false>::~do_curr_symbol() const
vfunc[6]:	money_punct<char, false>::~do_positive_sign() const
vfunc[7]:	money_punct<char, false>::~do_negative_sign() const
vfunc[8]:	money_punct<char, false>::~do_frac_digits() const
vfunc[9]:	money_punct<char, false>::~do_pos_format() const
vfunc[10]:	money_punct<char, false>::~do_neg_format() const

### 7.1.121.2 Interfaces for Class money\_punct<char, false>

An LSB conforming implementation shall provide the architecture specific methods for Class std::money\_punct<char, false> specified in Table 7-248, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-248 libstdc++ - Class money\_punct<char, false> Function Interfaces**

money_punct<char, false>::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, false>::money_punct(__money_punct_cache<char, false>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, false>::money_punct(unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, false>::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, false>::money_punct(__money_punct_cache<char, false>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, false>::money_punct(unsigned long)(GLIBCXX_3.4) [1]



Referenced Specification(s)

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.122 Class `moneypunct<char, true>`

### 7.1.122.1 Class data for `moneypunct<char, true>`

The virtual table for the `std::moneypunct<char, true>` class is described by Table 7-249

**Table 7-249 Primary vtable for `moneypunct<char, true>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>moneypunct&lt;char, true&gt;</code>
<code>vfunc[0]:</code>	<code>moneypunct&lt;char, true&gt;::~~moneypunct()</code>
<code>vfunc[1]:</code>	<code>moneypunct&lt;char, true&gt;::~~moneypunct()</code>
<code>vfunc[2]:</code>	<code>moneypunct&lt;char, true&gt;::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>moneypunct&lt;char, true&gt;::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>moneypunct&lt;char, true&gt;::do_grouping() const</code>
<code>vfunc[5]:</code>	<code>moneypunct&lt;char, true&gt;::do_curr_symbol() const</code>
<code>vfunc[6]:</code>	<code>moneypunct&lt;char, true&gt;::do_positive_sign() const</code>
<code>vfunc[7]:</code>	<code>moneypunct&lt;char, true&gt;::do_negative_sign() const</code>
<code>vfunc[8]:</code>	<code>moneypunct&lt;char, true&gt;::do_frac_digits() const</code>
<code>vfunc[9]:</code>	<code>moneypunct&lt;char, true&gt;::do_pos_format() const</code>
<code>vfunc[10]:</code>	<code>moneypunct&lt;char, true&gt;::do_neg_format() const</code>

### 7.1.122.2 Interfaces for Class `moneypunct<char, true>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::moneypunct<char, true>` specified in Table 7-250, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-250 `libstdcxx` - Class `moneypunct<char, true>` Function Interfaces**

<code>moneypunct&lt;char, true&gt;::moneypunct(__locale_struct*, char const*, unsigned</code>
---

long)(GLIBCXX_3.4) [1]
money_punct<char, true>::money_punct(__money_punct_cache<char, true>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, true>::money_punct(unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, true>::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, true>::money_punct(__money_punct_cache<char, true>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<char, true>::money_punct(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.123 Class money\_punct<wchar\_t, false>

#### 7.1.123.1 Class data for money\_punct<wchar\_t, false>

The virtual table for the std::money\_punct<wchar\_t, false> class is described by Table 7-251

**Table 7-251 Primary vtable for money\_punct<wchar\_t, false>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for money_punct<wchar_t, false>
vfunc[0]:	money_punct<wchar_t, false>::~~money_punct()
vfunc[1]:	money_punct<wchar_t, false>::~~money_punct()
vfunc[2]:	money_punct<wchar_t, false>::do_decimal_point() const
vfunc[3]:	money_punct<wchar_t, false>::do_thousands_sep() const
vfunc[4]:	money_punct<wchar_t, false>::do_grouping() const
vfunc[5]:	money_punct<wchar_t, false>::do_curr_symbol() const
vfunc[6]:	money_punct<wchar_t, false>::do_positive_sign() const
vfunc[7]:	money_punct<wchar_t, false>::do_negative_sign() const
vfunc[8]:	money_punct<wchar_t, false>::do_frac_digits() const

vfunc[9]:	money_punct<wchar_t, false>::do_pos_format() const
vfunc[10]:	money_punct<wchar_t, false>::do_neg_format() const

### 7.1.123.2 Interfaces for Class money\_punct<wchar\_t, false>

An LSB conforming implementation shall provide the architecture specific methods for Class std::money\_punct<wchar\_t, false> specified in Table 7-252, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-252 libstdc++ - Class money\_punct<wchar\_t, false> Function Interfaces**

money_punct<wchar_t, false>::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<wchar_t, false>::money_punct(__money_punct_cache<wchar_t, false>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<wchar_t, false>::money_punct(unsigned long)(GLIBCXX_3.4) [1]
money_punct<wchar_t, false>::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<wchar_t, false>::money_punct(__money_punct_cache<wchar_t, false>*, unsigned long)(GLIBCXX_3.4) [1]
money_punct<wchar_t, false>::money_punct(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.124 Class money\_punct<wchar\_t, true>

#### 7.1.124.1 Class data for money\_punct<wchar\_t, true>

The virtual table for the std::money\_punct<wchar\_t, true> class is described by Table 7-253

**Table 7-253 Primary vtable for money\_punct<wchar\_t, true>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for money_punct<wchar_t, true>
vfunc[0]:	money_punct<wchar_t, true>::~money_punct()
vfunc[1]:	money_punct<wchar_t, true>::~money_punct()
vfunc[2]:	money_punct<wchar_t, true>::do_decimal_point() const
vfunc[3]:	money_punct<wchar_t,

	true>::do_thousands_sep() const
vfunc[4]:	money_punct<wchar_t, true>::do_grouping() const
vfunc[5]:	money_punct<wchar_t, true>::do_curr_symbol() const
vfunc[6]:	money_punct<wchar_t, true>::do_positive_sign() const
vfunc[7]:	money_punct<wchar_t, true>::do_negative_sign() const
vfunc[8]:	money_punct<wchar_t, true>::do_frac_digits() const
vfunc[9]:	money_punct<wchar_t, true>::do_pos_format() const
vfunc[10]:	money_punct<wchar_t, true>::do_neg_format() const

#### 7.1.124.2 Interfaces for Class `money_punct<wchar_t, true>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::money_punct<wchar_t, true>` specified in Table 7-254, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-254 libstdc++ - Class `money_punct<wchar_t, true>` Function Interfaces**

<code>money_punct&lt;wchar_t, true&gt;::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct&lt;wchar_t, true&gt;::money_punct(__money_punct_cache&lt;wchar_t, true&gt;*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct&lt;wchar_t, true&gt;::money_punct(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct&lt;wchar_t, true&gt;::money_punct(__locale_struct*, char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct&lt;wchar_t, true&gt;::money_punct(__money_punct_cache&lt;wchar_t, true&gt;*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct&lt;wchar_t, true&gt;::money_punct(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

#### 7.1.125 Class `money_punct_byname<char, false>`

##### 7.1.125.1 Class data for `money_punct_byname<char, false>`

The virtual table for the `std::money_punct_byname<char, false>` class is described by Table 7-255

**Table 7-255 Primary vtable for moneypunct\_byname<char, false>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct_byname<char, false>
vfunc[0]:	moneypunct_byname<char, false>::~~moneypunct_byname()
vfunc[1]:	moneypunct_byname<char, false>::~~moneypunct_byname()
vfunc[2]:	moneypunct<char, false>::do_decimal_point() const
vfunc[3]:	moneypunct<char, false>::do_thousands_sep() const
vfunc[4]:	moneypunct<char, false>::do_grouping() const
vfunc[5]:	moneypunct<char, false>::do_curr_symbol() const
vfunc[6]:	moneypunct<char, false>::do_positive_sign() const
vfunc[7]:	moneypunct<char, false>::do_negative_sign() const
vfunc[8]:	moneypunct<char, false>::do_frac_digits() const
vfunc[9]:	moneypunct<char, false>::do_pos_format() const
vfunc[10]:	moneypunct<char, false>::do_neg_format() const

The Run Time Type Information for the `std::moneypunct_byname<char, false>` class is described by Table 7-256

**Table 7-256 typeinfo for moneypunct\_byname<char, false>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for moneypunct_byname<char, false>

### 7.1.125.2 Interfaces for Class `moneypunct_byname<char, false>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::moneypunct_byname<char, false>` specified in Table 7-257, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-257 libstdcxx - Class moneypunct\_byname<char, false> Function Interfaces**

moneypunct_byname<char, false>::moneypunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
moneypunct_byname<char, false>::moneypunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.126 Class moneypunct\_byname<char, true>

### 7.1.126.1 Class data for moneypunct\_byname<char, true>

The virtual table for the std::moneypunct\_byname<char, true> class is described by Table 7-258

**Table 7-258 Primary vtable for moneypunct\_byname<char, true>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct_byname<char, true>
vfunc[0]:	moneypunct_byname<char, true>::~~moneypunct_byname()
vfunc[1]:	moneypunct_byname<char, true>::~~moneypunct_byname()
vfunc[2]:	moneypunct<char, true>::do_decimal_point() const
vfunc[3]:	moneypunct<char, true>::do_thousands_sep() const
vfunc[4]:	moneypunct<char, true>::do_grouping() const
vfunc[5]:	moneypunct<char, true>::do_curr_symbol() const
vfunc[6]:	moneypunct<char, true>::do_positive_sign() const
vfunc[7]:	moneypunct<char, true>::do_negative_sign() const
vfunc[8]:	moneypunct<char, true>::do_frac_digits() const
vfunc[9]:	moneypunct<char, true>::do_pos_format() const
vfunc[10]:	moneypunct<char, true>::do_neg_format() const

The Run Time Type Information for the `std::moneypunct_byname<char, true>` class is described by Table 7-259

**Table 7-259 typeid for `moneypunct_byname<char, true>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeid name for <code>moneypunct_byname&lt;char, true&gt;</code>

### 7.1.126.2 Interfaces for Class `moneypunct_byname<char, true>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::moneypunct_byname<char, true>` specified in Table 7-260, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-260 libstdc++ - Class `moneypunct_byname<char, true>` Function Interfaces**

<code>moneypunct_byname&lt;char, true&gt;::moneypunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>moneypunct_byname&lt;char, true&gt;::moneypunct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.127 Class `moneypunct_byname<wchar_t, false>`

#### 7.1.127.1 Class data for `moneypunct_byname<wchar_t, false>`

The virtual table for the `std::moneypunct_byname<wchar_t, false>` class is described by Table 7-261

**Table 7-261 Primary vtable for `moneypunct_byname<wchar_t, false>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for <code>moneypunct_byname&lt;wchar_t, false&gt;</code>
<code>vfunc[0]:</code>	<code>moneypunct_byname&lt;wchar_t, false&gt;::~~moneypunct_byname()</code>
<code>vfunc[1]:</code>	<code>moneypunct_byname&lt;wchar_t, false&gt;::~~moneypunct_byname()</code>
<code>vfunc[2]:</code>	<code>moneypunct&lt;wchar_t, false&gt;::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>moneypunct&lt;wchar_t, false&gt;::do_thousands_sep() const</code>

vfunc[4]:	money_punct<wchar_t, false>::do_grouping() const
vfunc[5]:	money_punct<wchar_t, false>::do_curr_symbol() const
vfunc[6]:	money_punct<wchar_t, false>::do_positive_sign() const
vfunc[7]:	money_punct<wchar_t, false>::do_negative_sign() const
vfunc[8]:	money_punct<wchar_t, false>::do_frac_digits() const
vfunc[9]:	money_punct<wchar_t, false>::do_pos_format() const
vfunc[10]:	money_punct<wchar_t, false>::do_neg_format() const

The Run Time Type Information for the `std::money_punct_byname<wchar_t, false>` class is described by Table 7-262

**Table 7-262 typeinfo for `money_punct_byname<wchar_t, false>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>money_punct_byname&lt;wchar_t, false&gt;</code>

### 7.1.127.2 Interfaces for Class `money_punct_byname<wchar_t, false>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::money_punct_byname<wchar_t, false>` specified in Table 7-263, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-263 libstdc++ - Class `money_punct_byname<wchar_t, false>` Function Interfaces**

<code>money_punct_byname&lt;wchar_t, false&gt;::money_punct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_punct_byname&lt;wchar_t, false&gt;::money_punct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.128 Class `money_punct_byname<wchar_t, true>`

#### 7.1.128.1 Class data for `money_punct_byname<wchar_t, true>`

The virtual table for the `std::money_punct_byname<wchar_t, true>` class is described by Table 7-264



**Table 7-264 Primary vtable for `money_punct_byname<wchar_t, true>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>money_punct_byname&lt;wchar_t, true&gt;</code>
<code>vfunc[0]:</code>	<code>money_punct_byname&lt;wchar_t, true&gt;::~~money_punct_byname()</code>
<code>vfunc[1]:</code>	<code>money_punct_byname&lt;wchar_t, true&gt;::~~money_punct_byname()</code>
<code>vfunc[2]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_grouping() const</code>
<code>vfunc[5]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_curr_symbol() const</code>
<code>vfunc[6]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_positive_sign() const</code>
<code>vfunc[7]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_negative_sign() const</code>
<code>vfunc[8]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_frac_digits() const</code>
<code>vfunc[9]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_pos_format() const</code>
<code>vfunc[10]:</code>	<code>money_punct&lt;wchar_t, true&gt;::do_neg_format() const</code>

The Run Time Type Information for the `std::money_punct_byname<wchar_t, true>` class is described by Table 7-265

**Table 7-265 typeinfo for `money_punct_byname<wchar_t, true>`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>money_punct_byname&lt;wchar_t, true&gt;</code>

### 7.1.128.2 Interfaces for Class `money_punct_byname<wchar_t, true>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::money_punct_byname<wchar_t, true>` specified in Table 7-266, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-266 libstdcxx - Class money\_punct\_byname<wchar\_t, true> Function Interfaces**

money_punct_byname<wchar_t, true>::money_punct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]
money_punct_byname<wchar_t, true>::money_punct_byname(char const*, unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.129 Class money\_base

### 7.1.129.1 Class data for money\_base

The Run Time Type Information for the std::money\_base class is described by Table 7-267

**Table 7-267 typeid for money\_base**

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeid name for money_base

### 7.1.129.2 Interfaces for Class money\_base

No external methods are defined for libstdcxx - Class std::money\_base

## 7.1.130 Class money\_get<char, istreambuf\_iterator<char, char\_traits<char> > >

### 7.1.130.1 Class data for money\_get<char, istreambuf\_iterator<char, char\_traits<char> > >

The virtual table for the std::money\_get<char, std::istreambuf\_iterator<char, std::char\_traits<char> > > class is described by Table 7-268

**Table 7-268 Primary vtable for money\_get<char, istreambuf\_iterator<char, char\_traits<char> > >**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for money_get<char, istreambuf_iterator<char, char_traits<char> > >
vfunc[0]:	money_get<char, istreambuf_iterator<char, char_traits<char> > >::~~money_get()
vfunc[1]:	money_get<char, istreambuf_iterator<char, char_traits<char> > >::~money_get()

vfunc[2]:	money_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, long double&) const
vfunc[3]:	money_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const

The Run Time Type Information for the `std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char> > >` class is described by Table 7-269

**Table 7-269 typeinfo for `money_get<char, istreambuf_iterator<char, char_traits<char> > >`**

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>money_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;</code>

### 7.1.130.2 Interfaces for Class `money_get<char, istreambuf_iterator<char, char_traits<char> > >`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char> > >` specified in Table 7-270, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-270 libstdc++ - Class `money_get<char, istreambuf_iterator<char, char_traits<char> > >` Function Interfaces**

<code>money_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::money_get(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>money_get&lt;char, istreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::money_get(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.131 Class `money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

#### 7.1.131.1 Class data for `money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

The virtual table for the `std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by Table 7-271

**Table 7-271 Primary vtable for `money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>money_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code>
vfunc[0]:	<code>money_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~money_get()</code>
vfunc[1]:	<code>money_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~money_get()</code>
vfunc[2]:	<code>money_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_get(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, bool, ios_base&amp;, _Ios_Iostate&amp;, long double&amp;) const</code>
vfunc[3]:	<code>money_get&lt;wchar_t, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_get(istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, istreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, bool, ios_base&amp;, _Ios_Iostate&amp;, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt;&amp;) const</code>

The Run Time Type Information for the `std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by Table 7-272

**Table 7-272 typeid for money\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t>>>**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

### 7.1.131.2 Interfaces for Class money\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t>>>

An LSB conforming implementation shall provide the architecture specific methods for Class std::money\_get<wchar\_t, std::istreambuf\_iterator<wchar\_t, std::char\_traits<wchar\_t>>> specified in Table 7-273, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-273 libstdc++ - Class money\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t>>> Function Interfaces**

money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>::money_get(unsigned long)(GLIBCXX_3.4) [1]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>::money_get(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.132 Class money\_put<char, ostreambuf\_iterator<char, char\_traits<char>>>

#### 7.1.132.1 Class data for money\_put<char, ostreambuf\_iterator<char, char\_traits<char>>>

The virtual table for the std::money\_put<char, std::ostreambuf\_iterator<char, std::char\_traits<char>>> class is described by Table 7-274

**Table 7-274 Primary vtable for money\_put<char, ostreambuf\_iterator<char, char\_traits<char>>>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeid for money_put<char, ostreambuf_iterator<char, char_traits<char>>>
vfunc[0]:	money_put<char, ostreambuf_iterator<char, char_traits<char>>>::~money_put()
vfunc[1]:	money_put<char, ostreambuf_iterator<char,

	char_traits<char> > >::~money_put()
vfunc[2]:	money_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char, long double) const
vfunc[3]:	money_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char, basic_string<char, char_traits<char>, allocator<char> > const&) const

The Run Time Type Information for the std::money\_put<char, std::ostreambuf\_iterator<char, std::char\_traits<char> > > class is described by Table 7-275

**Table 7-275 typeid for money\_put<char, ostreambuf\_iterator<char, char\_traits<char> > >**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeid name for money_put<char, ostreambuf_iterator<char, char_traits<char> > >

### 7.1.132.2 Interfaces for Class money\_put<char, ostreambuf\_iterator<char, char\_traits<char> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::money\_put<char, std::ostreambuf\_iterator<char, std::char\_traits<char> > > specified in Table 7-276, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-276 libstdcxx - Class money\_put<char, ostreambuf\_iterator<char, char\_traits<char> > > Function Interfaces**

money_put<char, ostreambuf_iterator<char, char_traits<char> > >::money_put(unsigned long)(GLIBCXX_3.4) [1]
money_put<char, ostreambuf_iterator<char, char_traits<char> > >::money_put(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### 7.1.133 Class `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

#### 7.1.133.1 Class data for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

The virtual table for the `std::money_put<wchar_t, ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by Table 7-277

**Table 7-277 Primary vtable for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>money_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;</code>
vfunc[0]:	<code>money_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~money_put()</code>
vfunc[1]:	<code>money_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::~money_put()</code>
vfunc[2]:	<code>money_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_put(ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, bool, ios_base&amp;, wchar_t, long double) const</code>
vfunc[3]:	<code>money_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;&gt;::do_put(ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt;&gt;, bool, ios_base&amp;, wchar_t, basic_string&lt;wchar_t, char_traits&lt;wchar_t&gt;, allocator&lt;wchar_t&gt;&gt; const&amp;) const</code>

The Run Time Type Information for the `std::money_put<wchar_t, ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by Table 7-278

**Table 7-278 typeinfo for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`**

Base Vtable	vtable for
-------------	------------

	__cxxabiv1::__si_class_type_info
Name	typeinfo name for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >

### 7.1.133.2 Interfaces for Class money\_put<wchar\_t, ostreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::money\_put<wchar\_t, std::ostreambuf\_iterator<wchar\_t, std::char\_traits<wchar\_t> > > specified in Table 7-279, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-279 libstdcxx - Class money\_put<wchar\_t, ostreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> > > Function Interfaces**

money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::money_put(unsigned long)(GLIBCXX_3.4) [1]
money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::money_put(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.1.134 Class locale

### 7.1.134.1 Interfaces for Class locale

An LSB conforming implementation shall provide the architecture specific methods for Class std::locale specified in Table 7-280, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-280 libstdcxx - Class locale Function Interfaces**

locale::_Impl::_Impl(char const*, unsigned long)(GLIBCXX_3.4) [1]
locale::_Impl::_Impl(locale::_Impl const&, unsigned long)(GLIBCXX_3.4) [1]
locale::_Impl::_Impl(unsigned long)(GLIBCXX_3.4) [1]
locale::_Impl::_Impl(char const*, unsigned long)(GLIBCXX_3.4) [1]
locale::_Impl::_Impl(locale::_Impl const&, unsigned long)(GLIBCXX_3.4) [1]
locale::_Impl::_Impl(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. this specification

## 7.1.135 Class locale::facet

### 7.1.135.1 Class data for locale::facet

The virtual table for the std::locale::facet class is described by Table 7-281



**Table 7-281 Primary vtable for locale::facet**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for locale::facet
vfunc[0]:	locale::facet::~~facet()
vfunc[1]:	locale::facet::~~facet()

The Run Time Type Information for the std::locale::facet class is described by Table 7-282

**Table 7-282 typeinfo for locale::facet**

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for locale::facet

### 7.1.135.2 Interfaces for Class locale::facet

No external methods are defined for libstdcxx - Class std::locale::facet

## 7.1.136 facet functions

### 7.1.136.1 Interfaces for facet functions

No external methods are defined for libstdcxx - facet functions

## 7.1.137 Class \_\_num\_base

### 7.1.137.1 Class data for \_\_num\_base

The Run Time Type Information for the std::\_\_num\_base class is described by Table 7-283

**Table 7-283**

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

### 7.1.137.2 Interfaces for Class \_\_num\_base

No external methods are defined for libstdcxx - Class std::\_\_num\_base

## 7.1.138 Class num\_get<char, istreambuf\_iterator<char, char\_traits<char> > >

### 7.1.138.1 Interfaces for Class num\_get<char, istreambuf\_iterator<char, char\_traits<char> > >

An LSB conforming implementation shall provide the architecture specific methods for Class std::num\_get<char, std::istreambuf\_iterator<char, std::char\_traits<char> > > specified in Table 7-284, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-284 libstdcxx - Class num\_get<char, istreambuf\_iterator<char, char\_traits<char> > > Function Interfaces**

num_get<char, istreambuf_iterator<char, char_traits<char> > >::num_get(unsigned long)(GLIBCXX_3.4) [1]
num_get<char, istreambuf_iterator<char, char_traits<char> > >::num_get(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### **7.1.139 Class num\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> > >**

#### **7.1.139.1 Interfaces for Class num\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> > >**

An LSB conforming implementation shall provide the architecture specific methods for Class std::num\_get<wchar\_t, std::istreambuf\_iterator<wchar\_t, std::char\_traits<wchar\_t> > > specified in Table 7-285, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-285 libstdcxx - Class num\_get<wchar\_t, istreambuf\_iterator<wchar\_t, char\_traits<wchar\_t> > > Function Interfaces**

num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::num_get(unsigned long)(GLIBCXX_3.4) [1]
num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::num_get(unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### **7.1.140 Class num\_put<char, ostreambuf\_iterator<char, char\_traits<char> > >**

#### **7.1.140.1 Interfaces for Class num\_put<char, ostreambuf\_iterator<char, char\_traits<char> > >**

An LSB conforming implementation shall provide the architecture specific methods for Class std::num\_put<char, std::ostreambuf\_iterator<char, std::char\_traits<char> > > specified in Table 7-286, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-286 libstdcxx - Class num\_put<char, ostreambuf\_iterator<char, char\_traits<char> > > Function Interfaces**

num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_group_int(char const*, unsigned long, char, ios_base&, char*, char*, int&) const(GLIBCXX_3.4) [1]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_group_float(char const*, unsigned long, char, char const*, char*, char*,

<code>int&amp;) const(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::_M_pad(char, long, ios_base&amp;, char*, char const*, int&amp;) const(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::num_put(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;char, ostreambuf_iterator&lt;char, char_traits&lt;char&gt; &gt; &gt;::num_put(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

### **7.1.141 Class `num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`**

#### **7.1.141.1 Interfaces for Class `num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`**

An LSB conforming implementation shall provide the architecture specific methods for Class `std::num_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` specified in Table 7-287, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-287 libstdc++ - Class `num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >` Function Interfaces**

<code>num_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::_M_group_int(char const*, unsigned long, wchar_t, ios_base&amp;, wchar_t*, wchar_t*, int&amp;) const(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::_M_group_float(char const*, unsigned long, wchar_t, wchar_t const*, wchar_t*, wchar_t*, int&amp;) const(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::_M_pad(wchar_t, long, ios_base&amp;, wchar_t*, wchar_t const*, int&amp;) const(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::num_put(unsigned long)(GLIBCXX_3.4) [1]</code>
<code>num_put&lt;wchar_t, ostreambuf_iterator&lt;wchar_t, char_traits&lt;wchar_t&gt; &gt; &gt;::num_put(unsigned long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

**7.1.142 Class gslice****7.1.142.1 Class data for gslice****7.1.142.2 Interfaces for Class gslice**

An LSB conforming implementation shall provide the architecture specific methods for Class `std::gslice` specified in Table 7-288, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-288 libstdcxx - Class gslice Function Interfaces**

<code>gslice::_Indexer::_Indexer(unsigned long, valarray&lt;unsigned long&gt; const&amp;, valarray&lt;unsigned long&gt; const&amp;)(GLIBCXX_3.4) [1]</code>
<code>gslice::_Indexer::_Indexer(unsigned long, valarray&lt;unsigned long&gt; const&amp;, valarray&lt;unsigned long&gt; const&amp;)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

**7.1.143 Class \_\_basic\_file<char>****7.1.143.1 Class data for \_\_basic\_file<char>****7.1.143.2 Interfaces for Class \_\_basic\_file<char>**

An LSB conforming implementation shall provide the architecture specific methods for Class `std::__basic_file<char>` specified in Table 7-289, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-289 libstdcxx - Class \_\_basic\_file<char> Function Interfaces**

<code>__basic_file&lt;char&gt;::xsgetn(char*, long)(GLIBCXX_3.4) [1]</code>
<code>__basic_file&lt;char&gt;::xspn(char const*, long)(GLIBCXX_3.4) [1]</code>
<code>__basic_file&lt;char&gt;::seekoff(long, _Ios_Seekdir)(GLIBCXX_3.4) [1]</code>
<code>__basic_file&lt;char&gt;::xspn_2(char const*, long, char const*, long)(GLIBCXX_3.4) [1]</code>

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

**7.1.144 Class \_List\_node\_base****7.1.144.1 Interfaces for Class \_List\_node\_base**

No external methods are defined for libstdcxx - Class `std::_List_node_base`

### 7.1.145 Class `valarray<unsigned int>`

#### 7.1.145.1 Class data for `valarray<unsigned int>`

#### 7.1.145.2 Interfaces for Class `valarray<unsigned int>`

An LSB conforming implementation shall provide the architecture specific methods for Class `std::valarray<unsigned int>` specified in Table 7-290, with the full mandatory functionality as described in the referenced underlying specification.

**Table 7-290 `libstdcxx` - Class `valarray<unsigned int>` Function Interfaces**

<code>valarray&lt;unsigned long&gt;::size() const</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::valarray(valarray&lt;unsigned long&gt; const&amp;)</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::valarray(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::valarray(valarray&lt;unsigned long&gt; const&amp;)</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::valarray(unsigned long)</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::~~valarray()</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::~~valarray()</code> (GLIBCXX_3.4) [1]
<code>valarray&lt;unsigned long&gt;::operator[]</code> (unsigned long)(GLIBCXX_3.4) [1]

*Referenced Specification(s)*

[1]. ISO/IEC 14882: 2003 C++ Language

## 7.2 Interface Definitions for `libstdcxx`

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

Other interfaces listed above for `libstdcxx` shall behave as described in the referenced base document.

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Version 1.1, March 2000

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