

INTERNATIONAL
STANDARD

ISO/IEC
23360-1-3

First edition
2021-08

Linux Standard Base (LSB) —
Part 1-3:
Desktop specification generic part

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC PRF 23360-1-3](https://standards.iteh.ai/catalog/standards/sist/479970c3-fbf421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3)

<https://standards.iteh.ai/catalog/standards/sist/479970c3-fbf421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3>



Reference number
ISO/IEC 23360-1-3:2021(E)

© ISO/IEC 2021

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC PRF 23360-1-3](https://standards.iteh.ai/catalog/standards/sist/479970c3-ffb4-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3)

<https://standards.iteh.ai/catalog/standards/sist/479970c3-ffb4-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3>



COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2021

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

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

Published in Switzerland

Foreword

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

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

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

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

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

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

This first edition of ISO/IEC 23360-1-3 cancels and replaces ISO/IEC 23360-1:2006, which has been technically revised.

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

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

Contents

Foreword	iii
Introduction	viii
I Introductory Elements	1
1 Scope	2
2 References.....	3
2.1 Normative References	3
2.2 Informative References/Bibliography.....	6
3 Requirements	7
3.1 Relevant Libraries	7
4 Terms and Definitions	9
5 Documentation Conventions	11
II Graphic Libraries	12
6 Libraries.....	13
6.1 Interfaces for libX11.....	13
6.2 Data Definitions for libX11.....	23
6.3 Interface Definitions for libX11.....	180
6.4 Interfaces for libSM.....	180
6.5 Data Definitions for libSM.....	181
6.6 Interfaces for libICE.....	185
6.7 Data Definitions for libICE.....	187
6.8 Interface Definitions for libICE.....	194
6.9 Interfaces for libXt.....	196
6.10 Data Definitions for libXt.....	201
6.11 Interface Definitions for libXt.....	235
6.12 Interfaces for libXext.....	236
6.13 Data Definitions for libXext.....	239
6.14 Interface Definitions for libXext.....	257
6.15 Interfaces for libXi.....	257
6.16 Data Definitions for libXi.....	258
6.17 Interfaces for libXtst.....	288
6.18 Data Definitions for libXtst.....	289
6.19 Interfaces for libxcb.....	290
6.20 Data Definitions for libxcb.....	298
6.21 Interface Definitions for libxcb.....	373
III OpenGL Libraries	374
7 Libraries.....	375
7.1 Interfaces for libGL.....	375
7.2 Data Definitions for libGL.....	384
7.3 Interfaces for libGLU.....	438
7.4 Data Definitions for libGLU.....	439
IV PNG12 library	445
8 Libraries.....	446
8.1 Interfaces for libpng12.....	446
8.2 Data Definitions for libpng12.....	448
8.3 Interface Definitions for libpng12.....	462
V JPEG library	527
9 Libraries.....	528
9.1 Interfaces for libjpeg.....	528

9.2 Data Definitions for libjpeg	529
9.3 Interface Definitions for libjpeg	539
VI Fontconfig library	561
10 Libraries.....	562
10.1 Interfaces for libfontconfig.....	562
10.2 Data Definitions for libfontconfig.....	565
11 Commands and Utilities.....	574
11.1 Commands and Utilities.....	574
11.2 Command Behavior	574
VII Freetype library	577
12 Libraries.....	578
12.1 Interfaces for libfreetype.....	578
12.2 Data Definitions for libfreetype.....	580
12.3 Interface Definitions for libfreetype.....	610
VIII Xft library	612
13 Libraries.....	613
13.1 Interfaces for libXft	613
13.2 Data Definitions for libXft	614
13.3 Interface Definitions for libXft	619
IX Xrender library.....	620
14 Libraries.....	621
14.1 Interfaces for libXrender	621
14.2 Data Definitions for libXrender	622
14.3 Interface Definitions for libXrender.....	629
X Cairo Vector Graphics library	630
15 Libraries.....	631
15.1 Interfaces for libcairo.....	631
15.2 Data Definitions for libcairo.....	638
15.3 Interface Definitions for libcairo.....	665
XI tiff library	666
16 Libraries.....	667
16.1 Interfaces for libtiff	667
16.2 Data Definitions for libtiff	669
XII GTK+ Stack Libraries	683
17 Libraries.....	684
17.1 Introduction	684
17.2 Interfaces for libglib-2.0	685
17.3 Data Definitions for libglib-2.0	726
17.4 Interface Definitions for libglib-2.0	795
17.5 Interfaces for libgmodule-2.0.....	796
17.6 Data Definitions for libgmodule-2.0.....	796
17.7 Interfaces for libgobject-2.0.....	797
17.8 Data Definitions for libgobject-2.0.....	810
17.9 Interface Definitions for libgobject-2.0.....	848
17.10 Interfaces for libgthread-2.0	849
17.11 Interfaces for libgio-2.0	850
17.12 Data Definitions for libgio-2.0	887
17.13 Interface Definitions for libgio-2.0	1048
17.14 Interfaces for libatk-1.0	1048
17.15 Data Definitions for libatk-1.0.....	1054

17.16	Interface Definitions for libatk-1.0.....	1079
17.17	Interfaces for libpango-1.0.....	1079
17.18	Data Definitions for libpango-1.0.....	1088
17.19	Interfaces for libpangocairo-1.0.....	1111
17.20	Data Definitions for libpangocairo-1.0.....	1113
17.21	Interfaces for libpangoft2-1.0.....	1114
17.22	Data Definitions for libpangoft2-1.0.....	1115
17.23	Interfaces for libpangoft2-1.0.....	1117
17.24	Data Definitions for libpangoft2-1.0.....	1119
17.25	Interfaces for libgdk_pixbuf-2.0.....	1121
17.26	Data Definitions for libgdk_pixbuf-2.0.....	1125
17.27	Interfaces for libgdk_pixbuf_xlib-2.0.....	1133
17.28	Data Definitions for libgdk_pixbuf_xlib-2.0.....	1134
17.29	Interfaces for libgdk-x11-2.0.....	1136
17.30	Data Definitions for libgdk-x11-2.0.....	1149
17.31	Interfaces for libgtk-x11-2.0.....	1210
17.32	Data Definitions for libgtk-x11-2.0.....	1272
17.33	Interface Definitions for libgtk-x11-2.0.....	1479
XIII	Qt Libraries.....	1482
18	Libraries.....	1483
18.1	Introduction.....	1483
18.2	Interfaces for libQtCore.....	1484
18.3	Data Definitions for libQtCore.....	1578
18.4	Interface Definitions for libQtCore.....	1620
18.5	Interfaces for libQtGui.....	1628
18.6	Data Definitions for libQtGui.....	2163
18.7	Interface Definitions for libQtGui.....	2209
18.8	Interfaces for libQtXml.....	2267
18.9	Data Definitions for libQtXml.....	2288
18.10	Interfaces for libQtOpenGL.....	2289
18.11	Data Definitions for libQtOpenGL.....	2300
18.12	Interface Definitions for libQtOpenGL.....	2301
18.13	Interfaces for libQtSql.....	2302
18.14	Data Definitions for libQtSql.....	2325
18.15	Interface Definitions for libQtSql.....	2327
18.16	Interfaces for libQtSvg.....	2328
18.17	Data Definitions for libQtSvg.....	2334
18.18	Interfaces for libQtNetwork.....	2335
18.19	Data Definitions for libQtNetwork.....	2356
18.20	Interface Definitions for libQtNetwork.....	2360
XIV	ALSA sound library.....	2362
19	Libraries.....	2363
19.1	Interfaces for libasound.....	2363
19.2	Data Definitions for libasound.....	2386
XV	Desktop Environment.....	2429
20	Desktop Environment.....	2430
20.1	Desktop Base Directory.....	2430
20.2	Desktop Entries.....	2430
20.3	Desktop Menu Specification.....	2430
20.4	Icon Theme Specification.....	2430

21 Desktop Commands.....	2431
21.1 Xdg-utils.....	2431
XVI Package Format and Installation	2432
22 Software Installation.....	2433
22.1 Package Dependencies	2433
Annex A Alphabetical Listing of Interfaces by Library.....	2434
A.1 libGL.....	2434
A.2 libGLU.....	2444
A.3 libICE	2445
A.4 libSM	2446
A.5 libX11	2447
A.6 libXext	2458
A.7 libXft	2460
A.8 libXi	2461
A.9 libXrender	2462
A.10 libXt	2463
A.11 libXtst.....	2468
A.12 libcairo	2468
A.13 libcairo-gobject	2475
A.14 libcairo-script-interpreter.....	2476
A.15 libfontconfig.....	2476
A.16 libfreetype	2479
A.17 libjpeg.....	2481
A.18 libpng12.....	2482
A.19 libtiff.....	2485
A.20 libxcb.....	2487
A.21 libatk-1.0	2496
A.22 libgdk-x11-2.0.....	2500
A.23 libgdk_pixbuf-2.0.....	2510
A.24 libgdk_pixbuf_xlib-2.0	2513
A.25 libgio-2.0	2514
A.26 libglib-2.0.....	2546
A.27 libgmodule-2.0	2570
A.28 libgobject-2.0	2570
A.29 libgthread-2.0	2578
A.30 libgtk-x11-2.0.....	2578
A.31 libpango-1.0.....	2628
A.32 libpangocairo-1.0	2635
A.33 libpangoft2-1.0.....	2636
A.34 libpangoxft-1.0	2637
A.35 libQtCore	2637
A.36 libQtGui.....	2687
A.37 libQtNetwork.....	2887
A.38 libQtOpenGL.....	2898
A.39 libQtSql	2904
A.40 libQtSvg.....	2913
A.41 libQtXml.....	2915
A.42 libasound	2925

iTech STANDARD PREVIEW
(standards.iteh.ai)

ISO/IEC PRF 23360-1-3

[https://standards.iteh.ai/catalog/standards/sist/479970c3-fbf-421c-91cf-](https://standards.iteh.ai/catalog/standards/sist/479970c3-fbf-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3)

[784d7c4ed890/iso-iec-prf-23360-1-3](https://standards.iteh.ai/catalog/standards/sist/479970c3-fbf-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3)

Introduction

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

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

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

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

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

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

I Introductory Elements

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO/IEC PRF 23360-1-3](https://standards.iteh.ai/catalog/standards/sist/479970c3-ffbf-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3)

<https://standards.iteh.ai/catalog/standards/sist/479970c3-ffbf-421c-91cf-784d7c4ed890/iso-iec-prf-23360-1-3>

1 Scope

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

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

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

This is the common part of the Desktop module of the Linux Standard Base (LSB). This module provides the fundamental system interfaces, libraries, and runtime environment upon which all conforming applications and libraries depend requiring the LSB Desktop module depend.

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

Interfaces described in this part of LSB Desktop are mandatory except where explicitly listed otherwise. Interfaces described in the LSB Desktop module supplement those described in the LSB Core module. They do not depend on other LSB modules.

2 References

2.1 Normative References

The specifications listed below are referenced in whole or in part by the LSB Desktop specification. Such references may be normative or informative; a reference to specification shall only be considered normative if it is explicitly cited as such. The LSB Desktop specification may make normative references to a portion of these specifications (that is, to define a specific function or group of functions); in such cases, only the explicitly referenced portion of the specification is to be considered normative.

Table 2-1 Normative References

Name	Title	URL
ATK 2.2.0 Reference Manual	ATK 2.2.0 Reference Manual	http://developer.gnome.org/atk/2.2/index.html
Double Buffer Extension Library	Double Buffer Extension Library - Protocol Version 1.0	http://refspecs.linux-foundation.org/X11/dbelbib.pdf
Fontconfig Developers Reference	Fontconfig Developers Reference, Version 2.6.0	http://refspecs.linuxfoundation.org/fontconfig-2.6.0
Gdk 2.10.14 Reference Manual	Gdk 2.10.14 Reference Manual	http://library.gnome.org/devel/gdk/2.10/
Gdk-pixbuf 2.26.0 Reference Manual	Gdk-pixbuf 2.26.0 Reference Manual	http://developer.gnome.org/gdk-pixbuf/2.26
Gio 2.32 Reference Manual	Gio 2.32 Reference Manual	http://developer.gnome.org/gio/2.32
Glib 2.32 Reference Manual	Glib 2.32 Reference Manual	http://developer.gnome.org/glib/2.32
Gobject 2.32 Reference Manual	Gobject 2.32 Reference Manual	http://developer.gnome.org/gobject/2.32
Gtk+ 2.10.14 Reference Manual	Gtk+ 2.10.14 Reference Manual	http://library.gnome.org/devel/gtk/2.10/
ISO C (1999)	ISO/IEC 9899:1999 - Programming Languages -- C	
ISO/IEC 14882: 2003 C++ Language	ISO/IEC 14882: 2003 Programming languages --C++	
Itanium™ C++ ABI	Itanium™ C++ ABI (Revision 1.86)	http://refspecs.linuxfoundation.org/cxxabi-1.86.html
Libtiff 4.0.2 Reference Manual	Libtiff 4.0.2 Reference Manual	http://www.libtiff.org/man/index.html

Name	Title	URL
Libxcb API	Libxcb API	http://xcb.freedesktop.org/XcbApi/
OpenGL 2.1	The OpenGL® Graphics System: A Specification (Version 2.1)	http://www.opengl.org/registry/doc/glspec2.1.20061201.pdf
OpenGL ABI	OpenGL® Application Binary Interface for Linux	http://www.opengl.org/registry/ABI/
OpenGL Extensions	OpenGL® Graphics with the X Window System® (Version 1.3)	http://opengl.org/doc/umentation/specs/glx/glx1.3.pdf
OpenGL Utilities	The OpenGL Graphics System Utility Library (Version 1.3)	http://www.opengl.org/documentation/specs/glu/glu1_3.pdf
Pango 1.30.1 Reference Manual	Pango 1.30.1 Reference Manual	http://developer.gnome.org/pango/1.30/index.html
POSIX 1003.1-2008 (ISO/IEC 9945-2009)	Portable Operating System Interface (POSIX®) 2008 Edition / The Open Group Technical Standard Base Specifications, Issue 7	http://www.unix.org/version4/
QtCore 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtcore.html
QtGui 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtgui.html
QtNetwork 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtnetwork.html
QtOpenGL 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtopengl.html
QtSql 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtsql.html
QtSvg 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtsvg.html
QtXml 4.2.0	Qt 4.2.0 Reference Manual	http://doc.qt.digia.com/4.2/qtxml.html
The MIT Shared Memory Extension	MIT-SHM - The MIT Shared Memory Extension - X version 11, Release 5	http://refspecs.linux-foundation.org/X11/mit-shm.pdf

Name	Title	URL
X Display Power Management Signaling	X Display Power Management Signaling (DPMS) Extension - Library Specification - Version 1.0	http://refspecs.linux-foundation.org/X11/DPMslib.pdf
X Extended Visual Interface Extension	Extended Visual Information Extension - Version 1.0	http://refspecs.linux-foundation.org/X11/evi.pdf
X Nonrectangular Window Shape Extension Library	X Nonrectangular Window Shape Extension Library - Version 1.0	http://refspecs.linux-foundation.org/X11/shapelib.pdf
X Record Extension Library	X Record Extension Library - Version 1.13	http://refspecs.linux-foundation.org/X11/recordlib.pdf
X Security Extension Specification	Security Extension Specification - Version 7.1	http://refspecs.linux-foundation.org/X11/security.pdf
X Synchronization Extension Library	X Synchronization Extension Library - Version 3.0	http://refspecs.linux-foundation.org/X11/synclib.pdf
X11 C Library	Xlib - C Language X Interface - X Version 11 Release 6.4	http://refspecs.linux-foundation.org/X11/xlib.pdf
X11 Input Library	X Input Device Extension Library - X Version 11, Release 6.4	http://refspecs.linux-foundation.org/X11/Xinput.pdf
X11 Inter-Client Exchange	Inter-Client Exchange Library - Version 1.0	http://refspecs.linux-foundation.org/X11/ICELib.pdf
X11 Keyboard Extension	X Keyboard Extension Library Specification - X Version 11, Release 6.4	http://refspecs.linux-foundation.org/X11/XKBlib.pdf
X11 Session Management	X Session Management Library - Version 1.0	http://refspecs.linux-foundation.org/X11/SMlib.pdf
X11 Toolkit Intrinsics	X Toolkit Intrinsics - C Language Interface - X Version 11, Release 6.4	http://refspecs.linux-foundation.org/X11/intrinsics.pdf
Xft Placeholder	Xft Specification Placeholder	
Xrender Placeholder	Xrender Specification Placeholder	http://refspecs.linux-foundation.org/X11/XRenderProtocol.html

Name	Title	URL
XTEST Extension Library	XTEST Extension Library - Version 2.2	http://refspecs.linux-foundation.org/X11/xtestlib.pdf

2.2 Informative References/Bibliography

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

Table 2-2 Other References

Name	Title	URL
A description on how to use and modify libpng	A description on how to use and modify libpng	http://www.libpng.org/pub/png/libpng-1.2.5-manual.html
ALSA Library API Reference	ALSA Library API Reference	http://www.alsa-project.org/alsa-doc/alsa-lib/
Base Directory Spec	XDG Base Directory Specification Version 0.6	http://standards.freedesktop.org/basedir-spec/basedir-spec-0.6.html
Cairo API Reference	Cairo Vector Graphics API Specification for 1.12.4	http://cairographics.org/manual-1.12.4
Desktop Entry Spec	Desktop Entry Specification Version 1.0	http://standards.freedesktop.org/desktop-entry-spec/desktop-entry-spec-1.0.html
Desktop Menu Spec	Desktop Menu Specification Version 1.0	http://standards.freedesktop.org/menu-spec/menu-spec-1.0.html
FreeType 2.2 Reference	FreeType 2.2.1 API Reference	http://refspecs.linuxfoundation.org/freetype/freetype-doc-2.2.1/docs/reference/ft2-toc.html
Icon Theme Spec	Icon Theme Specification Version 0.11	http://standards.freedesktop.org/icon-theme-spec/icon-theme-spec-0.11.html
Independent JPEG Group	Independent JPEG Group	http://www.ijg.org/
xdg-utils reference	Portland Project XDG Utilities Reference 1.0	http://portland.freedesktop.org/xdg-utils-1.0/

3 Requirements

3.1 Relevant Libraries

The libraries listed in Table 3-1 shall be available on a Linux Standard Base - Desktop system, with the specified runtime names. This list may be supplemented or amended by the architecture-specific specification.

Table 3-1 Standard Library Names

Library	Runtime Name
libGL	libGL.so.1
libGLU	libGLU.so.1
libICE	libICE.so.6
libQtCore	libQtCore.so.4
libQtGui	libQtGui.so.4
libQtNetwork	libQtNetwork.so.4
libQtOpenGL	libQtOpenGL.so.4
libQtSql	libQtSql.so.4
libQtSvg	libQtSvg.so.4
libQtXml	libQtXml.so.4
libSM	libSM.so.6
libX11	libX11.so.6
libXext	libXext.so.6
libXft	libXft.so.2
libXi	libXi.so.6
libXrender	libXrender.so.1
libXt	libXt.so.6
libXtst	libXtst.so.6
libasound	libasound.so.2
libatk-1.0	libatk-1.0.so.0
libcairo	libcairo.so.2
libcairo-gobject	libcairo-gobject.so.2
libcairo-script-interpreter	libcairo-script-interpreter.so.2
libfontconfig	libfontconfig.so.1
libfreetype	libfreetype.so.6
libgdk-x11-2.0	libgdk-x11-2.0.so.0
libgdk_pixbuf-2.0	libgdk_pixbuf-2.0.so.0
libgdk_pixbuf_xlib-2.0	libgdk_pixbuf_xlib-2.0.so.0