# Azul Zing 21
# Licensing Information
# 26.02.0.0

# Table of Contents


Introduction . . . 1
GNU General Public License version 2 (GPLv2) . . . 2
Azul Zing Builds of OpenJDK . . . 10
OpenJDK 21 . . . 45
- Module com.azul.crs.client . . . 45
  - ASM Bytecode Manipulation Framework v9.6 . . . 45
- Module com.azul.warp.sidecar . . . 45
  - AWS C Auth v0.8.0 . . . 45
  - AWS C Cal v0.8.0 . . . 50
  - AWS C Common v0.10.0 . . . 53
  - AWS C Compression v0.3.0 . . . 59
  - AWS C Event Stream v0.5.0 . . . 63
  - AWS C Http v0.9.0 . . . 68
  - AWS C Io v0.15.1 . . . 72
  - AWS C Mqtt v0.11.0 . . . 76
  - AWS C S3 v0.7.0 . . . 81
  - AWS C SDKUTILS v0.2.0 . . . 84
  - AWS Crt Cpp v0.29.3 . . . 88
  - AWS Lib Crypto v1.37.0 . . . 92
  - AWS SDK for C++ 1.11.454 . . . 102
  - Warp 2.7.1 . . . 110
  - aws-checksums v0.2.0 . . . 111
  - libgcrypt v1.6.6 . . . 115
  - libgpg-error v1.11 . . . 139
  - lz4 v1.9.4 . . . 159
  - s2n v1.5.7 . . . 168
- Module java.base . . . 172
  - ASM Bytecode Manipulation Framework v9.3 . . . 172
  - Bert Belder: wepoll v 1.5.8 . . . 173
  - Bouncy Castle ASN1 Utils FIPS library v2.1.5 . . . 173
  - Bouncy Castle FIPS provider v2.1.2 . . . 174
  - Bouncy Castle PKIX FIPS library v2.1.10 . . . 175
  - Bouncy Castle TLS/JSSE FIPS provider v2.1.22 . . . 175
  - Bouncy Castle provider for JDK 1.8 and up v1.80 . . . 176
  - CRIU (Checkpoint/Restore In Userspace) v3.17.1 . . . 176
  - Cryptix AES v3.2.0 . . . 194
  - International Components for Unicode (ICU4J) v72.1 . . . 194
  - Libffi v3.4.6 . . . 206

Mozilla Public Suffix List . . . 206
SipHash v1.0-68c8a7c . . . 214
The Unicode Standard, Unicode Character Database, Version 15.0.0 . . . 217
Unicode Common Local Data Repository (CLDR) v43 . . . 220
Warp 2.7.1 . . . 224
c-libutl 20160225 . . . 224
libnet v1.1.6 . . . 225
libnl v3.2.25 . . . 226
libnl v3.5.0 . . . 236
lz4 v1.9.4 . . . 246
protobuf v3.15.8 . . . 255
protobuf-c v1.4.1 . . . 256
zlib v1.3.1 . . . 257
Module java.desktop . . . 257
Eastman Kodak Company: Portions of color management and imaging software . . . 257
GIFLIB v5.2.2 . . . 258
Harfbuzz 11.2.0 . . . 259
Independent JPEG Group: JPEG release 6b . . . 261
Little Color Management System (LCMS) v2.17 . . . 262
Mesa 3-D Graphics Library v21.0.3 . . . 264
PipeWire 1.3.81 . . . 267
The FreeType Project: Freetype v2.13.3 . . . 268
libpng v1.6.54 . . . 280
xwd v1.0.7 . . . 285
Module java.smartcardio . . . 286
PC/SC Lite v1.9.9 . . . 286
Module java.xml . . . 287
Apache Commons Byte Code Engineering Library (BCEL) Version 6.7.0 . . . 287
Apache Xalan v2.7.2 . . . 291
Apache Xerces v2.12.2 . . . 296
CUP Parser Generator for Java v 0.11b . . . 301
DOM Level 3 Core Specification v1.0 . . . 302
Module java.xml.crypto . . . 303
Apache Santuario v3.0.5 . . . 303
Module jdk.crypto.cryptoki . . . 308
IAIK (Institute for Applied Information Processing and Communication) PKCS#11 wrapper files v1 . . . 308
OASIS PKCS #11 Cryptographic Token Interface v3.1 . . . 309
Module jdk.dynalink . . . 310
Dynalink v.5 . . . 310
Module jdk.hsdis . . . 311

Capstone disassembly framework v4.0.2 . . . 311
HotSpot plugin for disassembling dynamically generated code (HSDIS) . . . 314
Module jdk.internal.le . . . 315
JLine v3.26.1 . . . 315
Module jdk.internal.opt . . . 316
jopt-simple v5.0.4 . . . 316
Module jdk.javadoc . . . 317
jQuery UI v1.14.1 . . . 317
jQuery v3.7.1 . . . 318
Module jdk.localedata . . . 318
Thai Dictionary . . . 318
Unicode Common Local Data Repository (CLDR) v43 . . . 319
Legal Notices . . . 323

# Introduction

Azul Zing incorporates third-party licensed software packages. Some of these have distribution restrictions and some have only reporting requirements. This document lists the third-party licensed software packages for Azul Zing products.

In addition to the licenses listed herein, there are numerous copyright notices by individual contributors where the author contributes the code under one of the licenses, with the requirement that the copyright notices be published. These copyright notices are also listed in this document.

For portions of the software that are licensed under open source license agreements that require Azul to make the source code available to a licensee, for a period of three years from the date of receipt of Azul Zing, Azul provides upon request, a complete machine readable copy of such source code on a medium customarily used for software interchange for a charge no more than the cost of physically performing source distribution. Please email azul_openJDK@azul.com for further information.

# GNU General Public License version 2 (GPLv2)

Certain portions of Azul Zing Builds of OpenJDK are based on source code from OpenJDK and licensed under the "GNU General Public License version 2 (GPLv2) with the Classpath Exception".

```
The GNU General Public License (GPL)

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Everyone is permitted to copy and distribute verbatim copies of this license
document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share
and change it.  By contrast, the GNU General Public License is intended to
guarantee your freedom to share and change free software--to make sure the
software is free for all its users.  This General Public License applies to
most of the Free Software Foundation's software and to any other program whose
authors commit to using it.  (Some other Free Software Foundation software is
covered by the GNU Library General Public License instead.) You can apply it to
your programs, too.

When we speak of free software, we are referring to freedom, not price.  Our
General Public Licenses are designed to make sure that you have the freedom to
distribute copies of free software (and charge for this service if you wish),
that you receive source code or can get it if you want it, that you can change
the software or use pieces of it in new free programs; and that you know you
can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny
you these rights or to ask you to surrender the rights.  These restrictions
translate to certain responsibilities for you if you distribute copies of the
software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for
a fee, you must give the recipients all the rights that you have.  You must
make sure that they, too, receive or can get the source code.  And you must
show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2)
offer you this license which gives you legal permission to copy, distribute
and/or modify the software.

Also, for each author's protection and ours, we want to make certain that
```

```
everyone understands that there is no warranty for this free software.  If the
software is modified by someone else and passed on, we want its recipients to
know that what they have is not the original, so that any problems introduced
by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents.  We
wish to avoid the danger that redistributors of a free program will
individually obtain patent licenses, in effect making the program proprietary.
To prevent this, we have made it clear that any patent must be licensed for
everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification
follow.

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice
placed by the copyright holder saying it may be distributed under the terms of
this General Public License.  The "Program", below, refers to any such program
or work, and a "work based on the Program" means either the Program or any
derivative work under copyright law: that is to say, a work containing the
Program or a portion of it, either verbatim or with modifications and/or
translated into another language.  (Hereinafter, translation is included
without limitation in the term "modification".) Each licensee is addressed as
"you".

Activities other than copying, distribution and modification are not covered by
this License; they are outside its scope.  The act of running the Program is
not restricted, and the output from the Program is covered only if its contents
constitute a work based on the Program (independent of having been made by
running the Program).  Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as
you receive it, in any medium, provided that you conspicuously and
appropriately publish on each copy an appropriate copyright notice and
disclaimer of warranty; keep intact all the notices that refer to this License
and to the absence of any warranty; and give any other recipients of the
Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may
at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus
forming a work based on the Program, and copy and distribute such modifications
or work under the terms of Section 1 above, provided that you also meet all of
these conditions:

    a) You must cause the modified files to carry prominent notices stating
    that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in whole or
```

in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,

c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with

Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.

6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

```
If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply and
the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or
other property right claims or to contest validity of any such claims; this
section has the sole purpose of protecting the integrity of the free software
distribution system, which is implemented by public license practices.  Many
people have made generous contributions to the wide range of software
distributed through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing to
distribute software through any other system and a licensee cannot impose that
choice.

This section is intended to make thoroughly clear what is believed to be a
consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain
countries either by patents or by copyrighted interfaces, the original
copyright holder who places the Program under this License may add an explicit
geographical distribution limitation excluding those countries, so that
distribution is permitted only in or among countries not thus excluded.  In
such case, this License incorporates the limitation as if written in the body
of this License.

9. The Free Software Foundation may publish revised and/or new versions of the
General Public License from time to time.  Such new versions will be similar in
spirit to the present version, but may differ in detail to address new problems
or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any later
version", you have the option of following the terms and conditions either of
that version or of any later version published by the Free Software Foundation.
If the Program does not specify a version number of this License, you may
choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs
whose distribution conditions are different, write to the author to ask for
permission.  For software which is copyrighted by the Free Software Foundation,
write to the Free Software Foundation; we sometimes make exceptions for this.
Our decision will be guided by the two goals of preserving the free status of
all derivatives of our free software and of promoting the sharing and reuse of
software generally.

NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR
THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN OTHERWISE
STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE
PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED,
```

```
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND
PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE PROGRAM PROVE DEFECTIVE,
YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL
ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE
PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY
GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR
INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA
BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER
OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible
use to the public, the best way to achieve this is to make it free software
which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program.  It is safest to attach
them to the start of each source file to most effectively convey the exclusion
of warranty; and each file should have at least the "copyright" line and a
pointer to where the full notice is found.

    One line to give the program's name and a brief idea of what it does.

    Copyright (C) <year> <name of author>

    This program is free software; you can redistribute it and/or modify it
    under the terms of the GNU General Public License as published by the Free
    Software Foundation; either version 2 of the License, or (at your option)
    any later version.

    This program is distributed in the hope that it will be useful, but WITHOUT
    ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or
    FITNESS FOR A PARTICULAR PURPOSE.  See the GNU General Public License for
    more details.

    You should have received a copy of the GNU General Public License along
    with this program; if not, write to the Free Software Foundation, Inc., 59
    Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it
starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year name of author Gnomovision comes
```

```
    with ABSOLUTELY NO WARRANTY; for details type 'show w'.  This is free
    software, and you are welcome to redistribute it under certain conditions;
    type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may be
called something other than 'show w' and 'show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school,
if any, to sign a "copyright disclaimer" for the program, if necessary.  Here
is a sample; alter the names:

    Yoyodyne, Inc., hereby disclaims all copyright interest in the program
    'Gnomovision' (which makes passes at compilers) written by James Hacker.

    signature of Ty Coon, 1 April 1989

    Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Library General Public
License instead of this License.


"CLASSPATH" EXCEPTION TO THE GPL

Certain source files distributed by Oracle America and/or its affiliates are
subject to the following clarification and special exception to the GPL, but
only where Oracle has expressly included in the particular source file's header
the words "Oracle designates this particular file as subject to the "Classpath"
exception as provided by Oracle in the LICENSE file that accompanied this code."

    Linking this library statically or dynamically with other modules is making
    a combined work based on this library.  Thus, the terms and conditions of
    the GNU General Public License cover the whole combination.

    As a special exception, the copyright holders of this library give you
    permission to link this library with independent modules to produce an
    executable, regardless of the license terms of these independent modules,
    and to copy and distribute the resulting executable under terms of your
    choice, provided that you also meet, for each linked independent module,
    the terms and conditions of the license of that module.  An independent
    module is a module which is not derived from or based on this library.  If
    you modify this library, you may extend this exception to your version of
    the library, but you are not obligated to do so.  If you do not wish to do
    so, delete this exception statement from your version.
```

ADDITIONAL INFORMATION ABOUT LICENSING

Certain files distributed by Oracle America, Inc. and/or its affiliates are
subject to the following clarification and special exception to the GPLv2,
based on the GNU Project exception for its Classpath libraries, known as the
GNU Classpath Exception.

Note that Oracle includes multiple, independent programs in this software
package.  Some of those programs are provided under licenses deemed
incompatible with the GPLv2 by the Free Software Foundation and others.
For example, the package includes programs licensed under the Apache
License, Version 2.0 and may include FreeType. Such programs are licensed
to you under their original licenses.

Oracle facilitates your further distribution of this package by adding the
Classpath Exception to the necessary parts of its GPLv2 code, which permits
you to use that code in combination with other independent modules not
licensed under the GPLv2. However, note that this would not permit you to
commingle code under an incompatible license with Oracle's GPLv2 licensed
code by, for example, cutting and pasting such code into a file also
containing Oracle's GPLv2 licensed code and then distributing the result.

Additionally, if you were to remove the Classpath Exception from any of the
files to which it applies and distribute the result, you would likely be
required to license some or all of the other code in that distribution under
the GPLv2 as well, and since the GPLv2 is incompatible with the license terms
of some items included in the distribution by Oracle, removing the Classpath
Exception could therefore effectively compromise your ability to further
distribute the package.

Failing to distribute notices associated with some files may also create
unexpected legal consequences.

Proceed with caution and we recommend that you obtain the advice of a lawyer
skilled in open source matters before removing the Classpath Exception or
making modifications to this package which may subsequently be redistributed
and/or involve the use of third party software.

# Azul Zing Builds of OpenJDK

```
LICENSES: Azul Zing Licenses and Copyrights

The Azul Systems(r) Zing(tm) platform runs Java(tm) applications. The Zing product has
two components, the Zing Virtual Machine (ZVM) that is a Java Virtual Machine (JVM),
and the Zing System Tools (ZST) that manage the elastic and highly scalable, shared
memory resources.

Azul incorporates some third-party licensed software packages into its
products. Some of these may or may not have distribution restrictions and some may
have only
reporting requirements. This document lists the third-party licensed software
packages for all Zing products.

Licenses and Copyright Notices
GNU General Public Licenses
  *  http://www.gnu.org/licenses/gpl-3.0.txt
  *  http://www.gnu.org/licenses/gpl-2.0.txt
GNU Lesser General Public Licenses
  * http://www.gnu.org/licenses/lgpl-3.0.txt
  * http://www.gnu.org/licenses/lgpl-2.1.txt
Apache Licenses
  * http://www.apache.org/licenses/LICENSE-1.1
  * http://www.apache.org/licenses/LICENSE-2.0
Eclipse Public License
  * http://www.eclipse.org/licenses/edl-v10.html

Auxiliary Copyright Notices
In addition to the above licenses, there are numerous copyright notices by
individual contributors where the author contributes the code under one of
the above licenses, with the requirement that the copyright notices be
published. These third-party software licenses are published below.

Legal Notices
Published March 27, 2026
Zing ZVM version 26.02
Zing 26.02.0.0-4 20260327 0
CRS 1.1.61


Copyright (c) 2005-2016, Azul Systems, Inc. 385 Moffett Park Drive, Suite 115,
Sunnyvale, CA 94089. All rights reserved.

Azul Systems, the Azul Systems logo, Zulu and Zing are registered
trademarks, and ReadyNow! is a trademark of Azul Systems Inc.
Java and OpenJDK are trademarks of Oracle Corporation and/or its
affiliated companies in the United States and other countries.
All other trademarks are the property of their respective holders.
```

```
==============================================================

==============================================================================
The LLVM Project is under the Apache License v2.0 with LLVM Exceptions:
==============================================================================

                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

    TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

    1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
```

```
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and
```

```
    (b) You must cause any modified files to carry prominent notices
        stating that You changed the files; and

    (c) You must retain, in the Source form of any Derivative Works
        that You distribute, all copyright, patent, trademark, and
        attribution notices from the Source form of the Work,
        excluding those notices that do not pertain to any part of
        the Derivative Works; and

    (d) If the Work includes a "NOTICE" text file as part of its
        distribution, then any Derivative Works that You distribute must
        include a readable copy of the attribution notices contained
        within such NOTICE file, excluding those notices that do not
        pertain to any part of the Derivative Works, in at least one
        of the following places: within a NOTICE text file distributed
        as part of the Derivative Works; within the Source form or
        documentation, if provided along with the Derivative Works; or,
        within a display generated by the Derivative Works, if and
        wherever such third-party notices normally appear. The contents
        of the NOTICE file are for informational purposes only and
        do not modify the License. You may add Your own attribution
        notices within Derivative Works that You distribute, alongside
        or as an addendum to the NOTICE text from the Work, provided
        that such additional attribution notices cannot be construed
        as modifying the License.

    You may add Your own copyright statement to Your modifications and
    may provide additional or different license terms and conditions
    for use, reproduction, or distribution of Your modifications, or
    for any such Derivative Works as a whole, provided Your use,
    reproduction, and distribution of the Work otherwise complies with
    the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
    any Contribution intentionally submitted for inclusion in the Work
    by You to the Licensor shall be under the terms and conditions of
    this License, without any additional terms or conditions.
    Notwithstanding the above, nothing herein shall supersede or modify
    the terms of any separate license agreement you may have executed
    with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
    names, trademarks, service marks, or product names of the Licensor,
    except as required for reasonable and customary use in describing the
    origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
    agreed to in writing, Licensor provides the Work (and each
    Contributor provides its Contributions) on an "AS IS" BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
```

```
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
      liable to You for damages, including any direct, indirect, special,
      incidental, or consequential damages of any character arising as a
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
```

```
    distributed under the License is distributed on an "AS IS" BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
    See the License for the specific language governing permissions and
    limitations under the License.


---- LLVM Exceptions to the Apache 2.0 License ----

As an exception, if, as a result of your compiling your source code, portions
of this Software are embedded into an Object form of such source code, you
may redistribute such embedded portions in such Object form without complying
with the conditions of Sections 4(a), 4(b) and 4(d) of the License.

In addition, if you combine or link compiled forms of this Software with
software that is licensed under the GPLv2 ("Combined Software") and if a
court of competent jurisdiction determines that the patent provision (Section
3), the indemnity provision (Section 9) or other Section of the License
conflicts with the conditions of the GPLv2, you may retroactively and
prospectively choose to deem waived or otherwise exclude such Section(s) of
the License, but only in their entirety and only with respect to the Combined
Software.

==============================================================================
Software from third parties included in the LLVM Project:
==============================================================================
The LLVM Project contains third party software which is under different license
terms. All such code will be identified clearly using at least one of two
mechanisms:
1) It will be in a separate directory tree with its own `LICENSE.txt` or
   `LICENSE` file at the top containing the specific license and restrictions
   which apply to that software, or
2) It will contain specific license and restriction terms at the top of every
   file.

==============================================================================
Legacy LLVM License (https://llvm.org/docs/DeveloperPolicy.html#legacy):
==============================================================================
University of Illinois/NCSA
Open Source License

Copyright (c) 2003-2019 University of Illinois at Urbana-Champaign.
All rights reserved.

Developed by:

    LLVM Team

    University of Illinois at Urbana-Champaign

    http://llvm.org
```

```
Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

    * Redistributions of source code must retain the above copyright notice,
      this list of conditions and the following disclaimers.

    * Redistributions in binary form must reproduce the above copyright notice,
      this list of conditions and the following disclaimers in the
      documentation and/or other materials provided with the distribution.

    * Neither the names of the LLVM Team, University of Illinois at
      Urbana-Champaign, nor the names of its contributors may be used to
      endorse or promote products derived from this Software without specific
      prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE
SOFTWARE.

-----------------
Google Test         llvm/utils/unittest/googletest
-----------------
Copyright 2008, Google Inc.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
    * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
```

```
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

-----------------
OpenBSD regex       llvm/lib/Support/{reg*, COPYRIGHT.regex}
-----------------

$OpenBSD: COPYRIGHT,v 1.3 2003/06/02 20:18:36 millert Exp $

Copyright 1992, 1993, 1994 Henry Spencer.  All rights reserved.
This software is not subject to any license of the American Telephone
and Telegraph Company or of the Regents of the University of California.

Permission is granted to anyone to use this software for any purpose on
any computer system, and to alter it and redistribute it, subject
to the following restrictions:

1. The author is not responsible for the consequences of use of this
   software, no matter how awful, even if they arise from flaws in it.

2. The origin of this software must not be misrepresented, either by
   explicit claim or by omission.  Since few users ever read sources,
   credits must appear in the documentation.

3. Altered versions must be plainly marked as such, and must not be
   misrepresented as being the original software.  Since few users
   ever read sources, credits must appear in the documentation.

4. This notice may not be removed or altered.

=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=
/*-
 * Copyright (c) 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
```

```
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)COPYRIGHT   8.1 (Berkeley) 3/16/94
 */


-----------------
OpenBSD regex       llvm/lib/Support/{reg*, COPYRIGHT.regex}
-----------------

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
```

```
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regcomp.c   8.5 (Berkeley) 3/20/94
 */

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)engine.c    8.5 (Berkeley) 3/20/94
 */

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
```

```
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regerror.c  8.4 (Berkeley) 3/20/94
 */
/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
```

```
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regex2.h    8.4 (Berkeley) 3/20/94
 */

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regexec.c   8.3 (Berkeley) 3/20/94
 */
```

```
/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992 Henry Spencer.
 * Copyright (c) 1992, 1993
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer of the University of Toronto.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regex.h 8.1 (Berkeley) 6/2/93
 */

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
```

```
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)regfree.c   8.3 (Berkeley) 3/20/94
 */

/*-
 * This code is derived from OpenBSD's libc, original license follows:
 *
 * Copyright (c) 1998 Todd C. Miller <Todd.Miller@courtesan.com>
 *
 * Permission to use, copy, modify, and distribute this software for any
 * purpose with or without fee is hereby granted, provided that the above
 * copyright notice and this permission notice appear in all copies.
 *
 * THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
 * WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
 * MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
 * ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
 * WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
 * ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
 * OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
 */

/*-
 * This code is derived from OpenBSD's libc/regex, original license follows:
 *
 * Copyright (c) 1992, 1993, 1994 Henry Spencer.
 * Copyright (c) 1992, 1993, 1994
 *  The Regents of the University of California.  All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * Henry Spencer.
 *
```

```
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. Neither the name of the University nor the names of its contributors
 *    may be used to endorse or promote products derived from this software
 *    without specific prior written permission.
 *
 * THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 *  @(#)utils.h 8.3 (Berkeley) 3/20/94
 */

------------------------------
pyyaml tests        llvm/test/YAMLParser/{*.data, LICENSE.TXT}
------------------------------


Copyright (c) 2006 Kirill Simonov

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

```
-----------------------------
md5 contributions
-----------------------------

/*
 * This code is derived from (original license follows):
 *
 * This is an OpenSSL-compatible implementation of the RSA Data Security, Inc.
 * MD5 Message-Digest Algorithm (RFC 1321).
 *
 * Homepage:
 * http://openwall.info/wiki/people/solar/software/public-domain-source-code/md5
 *
 * Author:
 * Alexander Peslyak, better known as Solar Designer <solar at openwall.com>
 *
 * This software was written by Alexander Peslyak in 2001.  No copyright is
 * claimed, and the software is hereby placed in the public domain.
 * In case this attempt to disclaim copyright and place the software in the
 * public domain is deemed null and void, then the software is
 * Copyright (c) 2001 Alexander Peslyak and it is hereby released to the
 * general public under the following terms:
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted.
 *
 * There's ABSOLUTELY NO WARRANTY, express or implied.
 *
 * (This is a heavily cut-down "BSD license".)
 *
 * This differs from Colin Plumb's older public domain implementation in that
 * no exactly 32-bit integer data type is required (any 32-bit or wider
 * unsigned integer data type will do), there's no compile-time endianness
 * configuration, and the function prototypes match OpenSSL's.  No code from
 * Colin Plumb's implementation has been reused; this comment merely compares
 * the properties of the two independent implementations.
 *
 * The primary goals of this implementation are portability and ease of use.
 * It is meant to be fast, but not as fast as possible.  Some known
 * optimizations are not included to reduce source code size and avoid
 * compile-time configuration.
 */

-----------------------------

/*
 * This code is derived from (original license follows):
 *
 * This is an OpenSSL-compatible implementation of the RSA Data Security, Inc.
 * MD5 Message-Digest Algorithm (RFC 1321).
```

```
 *
 * Homepage:
 * http://openwall.info/wiki/people/solar/software/public-domain-source-code/md5
 *
 * Author:
 * Alexander Peslyak, better known as Solar Designer <solar at openwall.com>
 *
 * This software was written by Alexander Peslyak in 2001.  No copyright is
 * claimed, and the software is hereby placed in the public domain.
 * In case this attempt to disclaim copyright and place the software in the
 * public domain is deemed null and void, then the software is
 * Copyright (c) 2001 Alexander Peslyak and it is hereby released to the
 * general public under the following terms:
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted.
 *
 * There's ABSOLUTELY NO WARRANTY, express or implied.
 *
 * See md5.c for more information.
 */

------------------------------
ConvertUTF.h
------------------------------
/*===--- ConvertUTF.h - Universal Character Names conversions ---------------===
 *
 * Part of the LLVM Project, under the Apache License v2.0 with LLVM Exceptions.
 * See https://llvm.org/LICENSE.txt for license information.
 * SPDX-License-Identifier: Apache-2.0 WITH LLVM-exception
 *
 *==------------------------------------------------------------------------==*/
/*
 * Copyright 2001-2004 Unicode, Inc.
 *
 * Disclaimer
 *
 * This source code is provided as is by Unicode, Inc. No claims are
 * made as to fitness for any particular purpose. No warranties of any
 * kind are expressed or implied. The recipient agrees to determine
 * applicability of information provided. If this file has been
 * purchased on magnetic or optical media from Unicode, Inc., the
 * sole remedy for any claim will be exchange of defective media
 * within 90 days of receipt.
 *
 * Limitations on Rights to Redistribute This Code
 *
 * Unicode, Inc. hereby grants the right to freely use the information
 * supplied in this file in the creation of products supporting the
 * Unicode Standard, and to make copies of this file in any form
 * for internal or external distribution as long as this notice
```

```
 * remains attached.
 */

------------------------------
UnicodeCaseFold.cpp
------------------------------
// This file was generated by utils/unicode-case-fold.py from the Unicode
// case folding database at
//    http://www.unicode.org/Public/9.0.0/ucd/CaseFolding.txt
# CaseFolding-9.0.0.txt
# Date: 2016-03-02, 18:54:54 GMT
# © 2016 Unicode®, Inc.
# Unicode and the Unicode Logo are registered trademarks of Unicode, Inc. in the U.S.
and other countries.
# For terms of use, see http://www.unicode.org/terms_of_use.html


LLVM System Interface Library
-------------------------------------------------------------------------------
The LLVM System Interface Library is licensed under the Illinois Open Source
License and has the following additional copyright:

Copyright (C) 2004 eXtensible Systems, Inc.

------------------------------
xxhash.h
------------------------------
/*
*  xxHash - Fast Hash algorithm
*  Copyright (C) 2012-2016, Yann Collet
*
*  BSD 2-Clause License (http://www.opensource.org/licenses/bsd-license.php)
*
*  Redistribution and use in source and binary forms, with or without
*  modification, are permitted provided that the following conditions are
*  met:
*
*  * Redistributions of source code must retain the above copyright
*  notice, this list of conditions and the following disclaimer.
*  * Redistributions in binary form must reproduce the above
*  copyright notice, this list of conditions and the following disclaimer
*  in the documentation and/or other materials provided with the
*  distribution.
*
*  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
*  "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
*  LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
*  A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
*  OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
*  SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
*  LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
```

```
*  DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
*  THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
*  (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
*  OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
*
*  You can contact the author at :
*  - xxHash homepage: http://www.xxhash.com
*  - xxHash source repository : https://github.com/Cyan4973/xxHash
*/


------------------------------
Google Benchmark source code  v1.4.1
------------------------------
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
```

(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

```
   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
          that You distribute, all copyright, patent, trademark, and
          attribution notices from the Source form of the Work,
          excluding those notices that do not pertain to any part of
          the Derivative Works; and

      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
          include a readable copy of the attribution notices contained
          within such NOTICE file, excluding those notices that do not
          pertain to any part of the Derivative Works, in at least one
          of the following places: within a NOTICE text file distributed
          as part of the Derivative Works; within the Source form or
          documentation, if provided along with the Derivative Works; or,
          within a display generated by the Derivative Works, if and
          wherever such third-party notices normally appear. The contents
          of the NOTICE file are for informational purposes only and
          do not modify the License. You may add Your own attribution
          notices within Derivative Works that You distribute, alongside
          or as an addendum to the NOTICE text from the Work, provided
          that such additional attribution notices cannot be construed
          as modifying the License.

      You may add Your own copyright statement to Your modifications and
      may provide additional or different license terms and conditions
      for use, reproduction, or distribution of Your modifications, or
      for any such Derivative Works as a whole, provided Your use,
      reproduction, and distribution of the Work otherwise complies with
      the conditions stated in this License.

   5. Submission of Contributions. Unless You explicitly state otherwise,
      any Contribution intentionally submitted for inclusion in the Work
      by You to the Licensor shall be under the terms and conditions of
      this License, without any additional terms or conditions.
      Notwithstanding the above, nothing herein shall supersede or modify
      the terms of any separate license agreement you may have executed
      with Licensor regarding such Contributions.

   6. Trademarks. This License does not grant permission to use the trade
      names, trademarks, service marks, or product names of the Licensor,
```

```
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]
```

```
   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
-----------------
libazintercept.so uses hdr_histogram:
-----------------
The code in this repository code was Written by Gil Tene, Michael Barker,
and Matt Warren, and released to the public domain, as explained at
http://creativecommons.org/publicdomain/zero/1.0/

For users of this code who wish to consume it under the "BSD" license
rather than under the public domain or CC0 contribution text mentioned
above, the code found under this directory is *also* provided under the
following license (commonly referred to as the BSD 2-Clause License). This
license does not detract from the above stated release of the code into
the public domain, and simply represents an additional license granted by
the Author.

-----------------------------------------------------------------------------
** Beginning of "BSD 2-Clause License" text. **

 Copyright (c) 2012, 2013, 2014 Gil Tene
 Copyright (c) 2014 Michael Barker
 Copyright (c) 2014 Matt Warren
 All rights reserved.

 Redistribution and use in source and binary forms, with or without
 modification, are permitted provided that the following conditions are met:

 1. Redistributions of source code must retain the above copyright notice,
    this list of conditions and the following disclaimer.

 2. Redistributions in binary form must reproduce the above copyright notice,
    this list of conditions and the following disclaimer in the documentation
    and/or other materials provided with the distribution.

 THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
 AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE
 LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
 CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
 SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
```

```
 INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
 CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
 ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
 THE POSSIBILITY OF SUCH DAMAGE.
-----------------------------------
Third party licenses for CNC client:
-----------------------------------
------------------
gRPC C++ library
------------------

 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
```

```
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
```

```
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.
```

```
   7. Disclaimer of Warranty. Unless required by applicable law or
      agreed to in writing, Licensor provides the Work (and each
      Contributor provides its Contributions) on an "AS IS" BASIS,
      WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
      liable to You for damages, including any direct, indirect, special,
      incidental, or consequential damages of any character arising as a
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use ths file except in compliance with the License.
   You may obtain a copy of the License at
```

```
       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.

-----------------------------------------------------------

BSD 3-Clause License

Copyright 2016, Google Inc.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice,
this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation
and/or other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its
contributors may be used to endorse or promote products derived from this
software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
THE POSSIBILITY OF SUCH DAMAGE.

-----------------------------------------------------------

Mozilla Public License, v. 2.0

This Source Code Form is subject to the terms of the Mozilla Public License,
v. 2.0. If a copy of the MPL was not distributed with this file, You can
obtain one at https://mozilla.org/MPL/2.0/.

--------------------
protobuf C++ library
```

```
--------------------

Copyright 2008 Google Inc.  All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
    * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Code generated by the Protocol Buffer compiler is owned by the owner
of the input file used when generating it.  This code is not
standalone and requires a support library to be linked with it.  This
support library is itself covered by the above license.

----------------------
abseil C++ library
----------------------

         Apache License
                           Version 2.0, January 2004
                        https://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
```

```
the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all
other entities that control, are controlled by, or are under common
control with that entity. For the purposes of this definition,
"control" means (i) the power, direct or indirect, to cause the
direction or management of such entity, whether by contract or
otherwise, or (ii) ownership of fifty percent (50%) or more of the
outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
```

```
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
```

wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing

```
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       https://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.

----------------------
c-ares C library
----------------------

c-ares license

Copyright (c) 2007 - 2018, Daniel Stenberg with many contributors, see AUTHORS file.

Copyright 1998 by the Massachusetts Institute of Technology.

Permission to use, copy, modify, and distribute this software and its documentation
for any purpose and without fee is hereby granted, provided that the above copyright
notice appear in all copies and that both that copyright notice and this permission
notice appear in supporting documentation, and that the name of M.I.T. not be used
```

```
in advertising or publicity pertaining to distribution of the software
without specific, written prior permission. M.I.T. makes no representations
about the suitability of this software for any purpose.
It is provided "as is" without express or implied warranty.

-------------------------
address_sorting C library
-------------------------

Copyright (C) 1995, 1996, 1997, and 1998 WIDE Project.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. Neither the name of the project nor the names of its contributors
   may be used to endorse or promote products derived from this software
   without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE PROJECT AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED.  IN NO EVENT SHALL THE PROJECT OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.

---------------------
upb C library
---------------------

Copyright (c) 2009-2021, Google LLC
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

    * Redistributions of source code must retain the above copyright
      notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above copyright
      notice, this list of conditions and the following disclaimer in the
      documentation and/or other materials provided with the distribution.
```

```
    * Neither the name of Google LLC nor the names of any other
      contributors may be used to endorse or promote products
      derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY GOOGLE INC. ``AS IS'' AND ANY EXPRESS OR IMPLIED
WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO
EVENT SHALL GOOGLE LLC BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER
IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.

----------
curl
----------

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2021, Daniel Stenberg, <daniel@haxx.se>, and many
contributors, see the THANKS file.

All rights reserved.

Permission to use, copy, modify, and distribute this software for any purpose
with or without fee is hereby granted, provided that the above copyright
notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF THIRD PARTY RIGHTS. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE
OR OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of a copyright holder shall not
be used in advertising or otherwise to promote the sale, use or other dealings
in this Software without prior written authorization of the copyright holder.
```

# OpenJDK 21

## Module com.azul.crs.client

### ASM Bytecode Manipulation Framework v9.6

#### ASM License

```
Copyright (c) 2000-2011 INRIA, France Telecom
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
3. Neither the name of the copyright holders nor the names of its
  contributors may be used to endorse or promote products derived from
  this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
THE POSSIBILITY OF SUCH DAMAGE.
```

---

## Module com.azul.warp.sidecar

### AWS C Auth v0.8.0

#### AWS C Auth Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

**Apache 2.0 License**

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
```

```
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
```

```
        that You distribute, all copyright, patent, trademark, and
        attribution notices from the Source form of the Work,
        excluding those notices that do not pertain to any part of
        the Derivative Works; and

    (d) If the Work includes a "NOTICE" text file as part of its
        distribution, then any Derivative Works that You distribute must
        include a readable copy of the attribution notices contained
        within such NOTICE file, excluding those notices that do not
        pertain to any part of the Derivative Works, in at least one
        of the following places: within a NOTICE text file distributed
        as part of the Derivative Works; within the Source form or
        documentation, if provided along with the Derivative Works; or,
        within a display generated by the Derivative Works, if and
        wherever such third-party notices normally appear. The contents
        of the NOTICE file are for informational purposes only and
        do not modify the License. You may add Your own attribution
        notices within Derivative Works that You distribute, alongside
        or as an addendum to the NOTICE text from the Work, provided
        that such additional attribution notices cannot be construed
        as modifying the License.

    You may add Your own copyright statement to Your modifications and
    may provide additional or different license terms and conditions
    for use, reproduction, or distribution of Your modifications, or
    for any such Derivative Works as a whole, provided Your use,
    reproduction, and distribution of the Work otherwise complies with
    the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
    any Contribution intentionally submitted for inclusion in the Work
    by You to the Licensor shall be under the terms and conditions of
    this License, without any additional terms or conditions.
    Notwithstanding the above, nothing herein shall supersede or modify
    the terms of any separate license agreement you may have executed
    with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
    names, trademarks, service marks, or product names of the Licensor,
    except as required for reasonable and customary use in describing the
    origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
    agreed to in writing, Licensor provides the Work (and each
    Contributor provides its Contributions) on an "AS IS" BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
    implied, including, without limitation, any warranties or conditions
    of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
    PARTICULAR PURPOSE. You are solely responsible for determining the
    appropriateness of using or redistributing the Work and assume any
    risks associated with Your exercise of permissions under this License.
```

```
8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
```

## AWS C Cal v0.8.0

### AWS C Cal Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).
```

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the

```
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
```

```
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.
```

## AWS C Common v0.10.0

### AWS C Common Notice

```
Copyright 2018 Amazon.com, Inc. or its affiliates. All Rights Reserved.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/
```

```
TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
```

to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

   (a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

```
      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
          include a readable copy of the attribution notices contained
          within such NOTICE file, excluding those notices that do not
          pertain to any part of the Derivative Works, in at least one
          of the following places: within a NOTICE text file distributed
          as part of the Derivative Works; within the Source form or
          documentation, if provided along with the Derivative Works; or,
          within a display generated by the Derivative Works, if and
          wherever such third-party notices normally appear. The contents
          of the NOTICE file are for informational purposes only and
          do not modify the License. You may add Your own attribution
          notices within Derivative Works that You distribute, alongside
          or as an addendum to the NOTICE text from the Work, provided
          that such additional attribution notices cannot be construed
          as modifying the License.

      You may add Your own copyright statement to Your modifications and
      may provide additional or different license terms and conditions
      for use, reproduction, or distribution of Your modifications, or
      for any such Derivative Works as a whole, provided Your use,
      reproduction, and distribution of the Work otherwise complies with
      the conditions stated in this License.

   5. Submission of Contributions. Unless You explicitly state otherwise,
      any Contribution intentionally submitted for inclusion in the Work
      by You to the Licensor shall be under the terms and conditions of
      this License, without any additional terms or conditions.
      Notwithstanding the above, nothing herein shall supersede or modify
      the terms of any separate license agreement you may have executed
      with Licensor regarding such Contributions.

   6. Trademarks. This License does not grant permission to use the trade
      names, trademarks, service marks, or product names of the Licensor,
      except as required for reasonable and customary use in describing the
      origin of the Work and reproducing the content of the NOTICE file.

   7. Disclaimer of Warranty. Unless required by applicable law or
      agreed to in writing, Licensor provides the Work (and each
      Contributor provides its Contributions) on an "AS IS" BASIS,
      WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
```

```
      liable to You for damages, including any direct, indirect, special,
      incidental, or consequential damages of any character arising as a
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

**Third party licenses**

```
** ittapi ittnotify.h; version v3.24.2 --
https://github.com/intel/ittapi/blob/master/include/ittnotify.h
```

```
Copyright (C) 2005-2019 Intel Corporation
SPDX-License-Identifier: GPL-2.0-only OR BSD-3-Clause

Amazon.com has chosen to use this file under the terms of the BSD-3-Clause
license.

Copyright (c) 2019 Intel Corporation. All rights reserved.

Redistribution and use in source and binary forms, with or without modification,
are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.

3. Neither the name of the copyright holder nor the names of its contributors
may be used to endorse or promote products derived from this software without
specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

------

** cJSON; version 1.7.16 -- https://github.com/DaveGamble/cJSON
Copyright (c) 2009-2017 Dave Gamble and cJSON contributors

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
```

```
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.

------

** libcbor; version 0.11.0 -- https://github.com/PJK/libcbor
Copyright (c) 2014-2017 Pavel Kalvoda

MIT License

Copyright (c) 2014-2017 Pavel Kalvoda

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## AWS C Compression v0.3.0

### AWS C Compression Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION
```

```
1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
```

```
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
          that You distribute, all copyright, patent, trademark, and
          attribution notices from the Source form of the Work,
          excluding those notices that do not pertain to any part of
          the Derivative Works; and

      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
```

```
        include a readable copy of the attribution notices contained
        within such NOTICE file, excluding those notices that do not
        pertain to any part of the Derivative Works, in at least one
        of the following places: within a NOTICE text file distributed
        as part of the Derivative Works; within the Source form or
        documentation, if provided along with the Derivative Works; or,
        within a display generated by the Derivative Works, if and
        wherever such third-party notices normally appear. The contents
        of the NOTICE file are for informational purposes only and
        do not modify the License. You may add Your own attribution
        notices within Derivative Works that You distribute, alongside
        or as an addendum to the NOTICE text from the Work, provided
        that such additional attribution notices cannot be construed
        as modifying the License.

    You may add Your own copyright statement to Your modifications and
    may provide additional or different license terms and conditions
    for use, reproduction, or distribution of Your modifications, or
    for any such Derivative Works as a whole, provided Your use,
    reproduction, and distribution of the Work otherwise complies with
    the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
    any Contribution intentionally submitted for inclusion in the Work
    by You to the Licensor shall be under the terms and conditions of
    this License, without any additional terms or conditions.
    Notwithstanding the above, nothing herein shall supersede or modify
    the terms of any separate license agreement you may have executed
    with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
    names, trademarks, service marks, or product names of the Licensor,
    except as required for reasonable and customary use in describing the
    origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
    agreed to in writing, Licensor provides the Work (and each
    Contributor provides its Contributions) on an "AS IS" BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
    implied, including, without limitation, any warranties or conditions
    of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
    PARTICULAR PURPOSE. You are solely responsible for determining the
    appropriateness of using or redistributing the Work and assume any
    risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
    whether in tort (including negligence), contract, or otherwise,
    unless required by applicable law (such as deliberate and grossly
    negligent acts) or agreed to in writing, shall any Contributor be
    liable to You for damages, including any direct, indirect, special,
    incidental, or consequential damages of any character arising as a
```

```
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## AWS C Event Stream v0.5.0

### AWS C Event Stream Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
```

represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

```
      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
          that You distribute, all copyright, patent, trademark, and
          attribution notices from the Source form of the Work,
          excluding those notices that do not pertain to any part of
          the Derivative Works; and

      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
          include a readable copy of the attribution notices contained
          within such NOTICE file, excluding those notices that do not
          pertain to any part of the Derivative Works, in at least one
          of the following places: within a NOTICE text file distributed
          as part of the Derivative Works; within the Source form or
          documentation, if provided along with the Derivative Works; or,
          within a display generated by the Derivative Works, if and
          wherever such third-party notices normally appear. The contents
          of the NOTICE file are for informational purposes only and
          do not modify the License. You may add Your own attribution
          notices within Derivative Works that You distribute, alongside
          or as an addendum to the NOTICE text from the Work, provided
          that such additional attribution notices cannot be construed
          as modifying the License.

      You may add Your own copyright statement to Your modifications and
      may provide additional or different license terms and conditions
      for use, reproduction, or distribution of Your modifications, or
      for any such Derivative Works as a whole, provided Your use,
      reproduction, and distribution of the Work otherwise complies with
      the conditions stated in this License.

   5. Submission of Contributions. Unless You explicitly state otherwise,
      any Contribution intentionally submitted for inclusion in the Work
      by You to the Licensor shall be under the terms and conditions of
      this License, without any additional terms or conditions.
      Notwithstanding the above, nothing herein shall supersede or modify
      the terms of any separate license agreement you may have executed
      with Licensor regarding such Contributions.

   6. Trademarks. This License does not grant permission to use the trade
      names, trademarks, service marks, or product names of the Licensor,
      except as required for reasonable and customary use in describing the
      origin of the Work and reproducing the content of the NOTICE file.

   7. Disclaimer of Warranty. Unless required by applicable law or
      agreed to in writing, Licensor provides the Work (and each
```

```
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0
```

```
   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## AWS C Http v0.9.0

### AWS C Http Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
```

```
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
```

```
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
```

```
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
```

```
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## AWS C Io v0.15.1

### AWS C Io Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.

The source/pkcs11/v2.40/pkcs11.h header file is based on Public Domain content from
https://github.com/latchset/pkcs11-headers
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
```

```
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
```

```
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
```

```
        notices within Derivative Works that You distribute, alongside
        or as an addendum to the NOTICE text from the Work, provided
        that such additional attribution notices cannot be construed
        as modifying the License.

    You may add Your own copyright statement to Your modifications and
    may provide additional or different license terms and conditions
    for use, reproduction, or distribution of Your modifications, or
    for any such Derivative Works as a whole, provided Your use,
    reproduction, and distribution of the Work otherwise complies with
    the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
    any Contribution intentionally submitted for inclusion in the Work
    by You to the Licensor shall be under the terms and conditions of
    this License, without any additional terms or conditions.
    Notwithstanding the above, nothing herein shall supersede or modify
    the terms of any separate license agreement you may have executed
    with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
    names, trademarks, service marks, or product names of the Licensor,
    except as required for reasonable and customary use in describing the
    origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
    agreed to in writing, Licensor provides the Work (and each
    Contributor provides its Contributions) on an "AS IS" BASIS,
    WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
    implied, including, without limitation, any warranties or conditions
    of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
    PARTICULAR PURPOSE. You are solely responsible for determining the
    appropriateness of using or redistributing the Work and assume any
    risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
    whether in tort (including negligence), contract, or otherwise,
    unless required by applicable law (such as deliberate and grossly
    negligent acts) or agreed to in writing, shall any Contributor be
    liable to You for damages, including any direct, indirect, special,
    incidental, or consequential damages of any character arising as a
    result of this License or out of the use or inability to use the
    Work (including but not limited to damages for loss of goodwill,
    work stoppage, computer failure or malfunction, or any and all
    other commercial damages or losses), even if such Contributor
    has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
    the Work or Derivative Works thereof, You may choose to offer,
    and charge a fee for, acceptance of support, warranty, indemnity,
    or other liability obligations and/or rights consistent with this
```

```
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## AWS C Mqtt v0.11.0

### AWS C Mqtt Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/
```

```
TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
```

```
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
          that You distribute, all copyright, patent, trademark, and
          attribution notices from the Source form of the Work,
          excluding those notices that do not pertain to any part of
          the Derivative Works; and
```

```
      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
          include a readable copy of the attribution notices contained
          within such NOTICE file, excluding those notices that do not
          pertain to any part of the Derivative Works, in at least one
          of the following places: within a NOTICE text file distributed
          as part of the Derivative Works; within the Source form or
          documentation, if provided along with the Derivative Works; or,
          within a display generated by the Derivative Works, if and
          wherever such third-party notices normally appear. The contents
          of the NOTICE file are for informational purposes only and
          do not modify the License. You may add Your own attribution
          notices within Derivative Works that You distribute, alongside
          or as an addendum to the NOTICE text from the Work, provided
          that such additional attribution notices cannot be construed
          as modifying the License.

      You may add Your own copyright statement to Your modifications and
      may provide additional or different license terms and conditions
      for use, reproduction, or distribution of Your modifications, or
      for any such Derivative Works as a whole, provided Your use,
      reproduction, and distribution of the Work otherwise complies with
      the conditions stated in this License.

   5. Submission of Contributions. Unless You explicitly state otherwise,
      any Contribution intentionally submitted for inclusion in the Work
      by You to the Licensor shall be under the terms and conditions of
      this License, without any additional terms or conditions.
      Notwithstanding the above, nothing herein shall supersede or modify
      the terms of any separate license agreement you may have executed
      with Licensor regarding such Contributions.

   6. Trademarks. This License does not grant permission to use the trade
      names, trademarks, service marks, or product names of the Licensor,
      except as required for reasonable and customary use in describing the
      origin of the Work and reproducing the content of the NOTICE file.

   7. Disclaimer of Warranty. Unless required by applicable law or
      agreed to in writing, Licensor provides the Work (and each
      Contributor provides its Contributions) on an "AS IS" BASIS,
      WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
```

```
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
```

## AWS C S3 v0.7.0

### AWS C S3 Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
```

```
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:
```

```
    (a) You must give any other recipients of the Work or
        Derivative Works a copy of this License; and

    (b) You must cause any modified files to carry prominent notices
        stating that You changed the files; and

    (c) You must retain, in the Source form of any Derivative Works
        that You distribute, all copyright, patent, trademark, and
        attribution notices from the Source form of the Work,
        excluding those notices that do not pertain to any part of
        the Derivative Works; and

    (d) If the Work includes a "NOTICE" text file as part of its
        distribution, then any Derivative Works that You distribute must
        include a readable copy of the attribution notices contained
        within such NOTICE file, excluding those notices that do not
        pertain to any part of the Derivative Works, in at least one
        of the following places: within a NOTICE text file distributed
        as part of the Derivative Works; within the Source form or
        documentation, if provided along with the Derivative Works; or,
        within a display generated by the Derivative Works, if and
        wherever such third-party notices normally appear. The contents
        of the NOTICE file are for informational purposes only and
        do not modify the License. You may add Your own attribution
        notices within Derivative Works that You distribute, alongside
        or as an addendum to the NOTICE text from the Work, provided
        that such additional attribution notices cannot be construed
        as modifying the License.

    You may add Your own copyright statement to Your modifications and
    may provide additional or different license terms and conditions
    for use, reproduction, or distribution of Your modifications, or
    for any such Derivative Works as a whole, provided Your use,
    reproduction, and distribution of the Work otherwise complies with
    the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
```

```
      agreed to in writing, Licensor provides the Work (and each
      Contributor provides its Contributions) on an "AS IS" BASIS,
      WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
      liable to You for damages, including any direct, indirect, special,
      incidental, or consequential damages of any character arising as a
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.
```

## AWS C SDKUTILS v0.2.0

### AWS C SDKUTILS Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION
```

```
   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
```

```
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
```

within such NOTICE file, excluding those notices that do not
pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed
as part of the Derivative Works; within the Source form or
documentation, if provided along with the Derivative Works; or,
within a display generated by the Derivative Works, if and
wherever such third-party notices normally appear. The contents
of the NOTICE file are for informational purposes only and
do not modify the License. You may add Your own attribution
notices within Derivative Works that You distribute, alongside
or as an addendum to the NOTICE text from the Work, provided
that such additional attribution notices cannot be construed
as modifying the License.

You may add Your own copyright statement to Your modifications and
may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the

```
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.
```

## AWS Crt Cpp v0.29.3

### AWS Crt Cpp Notice

```
Copyright 2018 Amazon.com, Inc. or its affiliates. All Rights Reserved.
SPDX-License-Identifier: Apache-2.0.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.
```

"You" (or "Your") shall mean an individual or Legal Entity
exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications,
including but not limited to software source code, documentation
source, and configuration files.

"Object" form shall mean any form resulting from mechanical
transformation or translation of a Source form, including but
not limited to compiled object code, generated documentation,
and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or
Object form, made available under the License, as indicated by a
copyright notice that is included in or attached to the work
(an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

```
   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
      cross-claim or counterclaim in a lawsuit) alleging that the Work
      or a Contribution incorporated within the Work constitutes direct
      or contributory patent infringement, then any patent licenses
      granted to You under this License for that Work shall terminate
      as of the date such litigation is filed.

   4. Redistribution. You may reproduce and distribute copies of the
      Work or Derivative Works thereof in any medium, with or without
      modifications, and in Source or Object form, provided that You
      meet the following conditions:

      (a) You must give any other recipients of the Work or
          Derivative Works a copy of this License; and

      (b) You must cause any modified files to carry prominent notices
          stating that You changed the files; and

      (c) You must retain, in the Source form of any Derivative Works
          that You distribute, all copyright, patent, trademark, and
          attribution notices from the Source form of the Work,
          excluding those notices that do not pertain to any part of
          the Derivative Works; and

      (d) If the Work includes a "NOTICE" text file as part of its
          distribution, then any Derivative Works that You distribute must
          include a readable copy of the attribution notices contained
          within such NOTICE file, excluding those notices that do not
          pertain to any part of the Derivative Works, in at least one
          of the following places: within a NOTICE text file distributed
          as part of the Derivative Works; within the Source form or
          documentation, if provided along with the Derivative Works; or,
          within a display generated by the Derivative Works, if and
          wherever such third-party notices normally appear. The contents
          of the NOTICE file are for informational purposes only and
          do not modify the License. You may add Your own attribution
          notices within Derivative Works that You distribute, alongside
          or as an addendum to the NOTICE text from the Work, provided
          that such additional attribution notices cannot be construed
          as modifying the License.

      You may add Your own copyright statement to Your modifications and
```

may provide additional or different license terms and conditions
for use, reproduction, or distribution of Your modifications, or
for any such Derivative Works as a whole, provided Your use,
reproduction, and distribution of the Work otherwise complies with
the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

```
   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "[]"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## AWS Lib Crypto v1.37.0

AWS Lib Crypto is a fork of BoringSSL, which is itself a fork of OpenSSL. New files from AWS-LC are made available under the Apache-2.0 license OR the ISC license. These licenses are reproduced at the bottom of this file.

#### AWS-LC Notice

```
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.
```

#### BoringSSL licensing

```
BoringSSL is a fork of OpenSSL. As such, large parts of it fall under OpenSSL
licensing. Files that are completely new have a Google copyright and an ISC
license. This license is reproduced at the bottom of this file.

Files in third_party/ have their own licenses, as described therein. The MIT
license, for third_party/fiat, which, unlike other third_party directories, is
```

```
compiled into non-test libraries, is included below.

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the
OpenSSL License and the original SSLeay license apply to the toolkit. See below
for the actual license texts. Actually both licenses are BSD-style Open Source
licenses. In case of any license issues related to OpenSSL please contact
openssl-core@openssl.org.

The following are Google-internal bug numbers where explicit permission from
some authors is recorded for use of their work. (This is purely for our own
record keeping.)
  27287199
  27287880
  27287883
  263291445
```

**OpenSSL License**

```
/* ====================================================================
 * Copyright (c) 1998-2011 The OpenSSL Project.  All rights reserved.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 *
 * 1. Redistributions of source code must retain the above copyright
 *    notice, this list of conditions and the following disclaimer.
 *
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in
 *    the documentation and/or other materials provided with the
 *    distribution.
 *
 * 3. All advertising materials mentioning features or use of this
 *    software must display the following acknowledgment:
 *    "This product includes software developed by the OpenSSL Project
 *    for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
 *
 * 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
 *    endorse or promote products derived from this software without
 *    prior written permission. For written permission, please contact
 *    openssl-core@openssl.org.
 *
 * 5. Products derived from this software may not be called "OpenSSL"
 *    nor may "OpenSSL" appear in their names without prior written
 *    permission of the OpenSSL Project.
 *
 * 6. Redistributions of any form whatsoever must retain the following
 *    acknowledgment:
 *    "This product includes software developed by the OpenSSL Project
```

```
 *    for use in the OpenSSL Toolkit (http://www.openssl.org/)"
 *
 * THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
 * EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
 * PURPOSE ARE DISCLAIMED.  IN NO EVENT SHALL THE OpenSSL PROJECT OR
 * ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
 * SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
 * NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
 * LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
 * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
 * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
 * OF THE POSSIBILITY OF SUCH DAMAGE.
 * ====================================================================
 *
 * This product includes cryptographic software written by Eric Young
 * (eay@cryptsoft.com).  This product includes software written by Tim
 * Hudson (tjh@cryptsoft.com).
 *
 */
```

**Original SSLeay License**

```
/* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
 * All rights reserved.
 *
 * This package is an SSL implementation written
 * by Eric Young (eay@cryptsoft.com).
 * The implementation was written so as to conform with Netscapes SSL.
 *
 * This library is free for commercial and non-commercial use as long as
 * the following conditions are aheared to.  The following conditions
 * apply to all code found in this distribution, be it the RC4, RSA,
 * lhash, DES, etc., code; not just the SSL code.  The SSL documentation
 * included with this distribution is covered by the same copyright terms
 * except that the holder is Tim Hudson (tjh@cryptsoft.com).
 *
 * Copyright remains Eric Young's, and as such any Copyright notices in
 * the code are not to be removed.
 * If this package is used in a product, Eric Young should be given attribution
 * as the author of the parts of the library used.
 * This can be in the form of a textual message at program startup or
 * in documentation (online or textual) provided with the package.
 *
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the copyright
 *    notice, this list of conditions and the following disclaimer.
```

```
 * 2. Redistributions in binary form must reproduce the above copyright
 *    notice, this list of conditions and the following disclaimer in the
 *    documentation and/or other materials provided with the distribution.
 * 3. All advertising materials mentioning features or use of this software
 *    must display the following acknowledgement:
 *    "This product includes cryptographic software written by
 *     Eric Young (eay@cryptsoft.com)"
 *    The word 'cryptographic' can be left out if the rouines from the library
 *    being used are not cryptographic related :-).
 * 4. If you include any Windows specific code (or a derivative thereof) from
 *    the apps directory (application code) you must include an acknowledgement:
 *    "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
 *
 * THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
 * ARE DISCLAIMED.  IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 * SUCH DAMAGE.
 *
 * The licence and distribution terms for any publically available version or
 * derivative of this code cannot be changed.  i.e. this code cannot simply be
 * copied and put under another distribution licence
 * [including the GNU Public Licence.]
 */
```

**ISC license used for completely new code in BoringSSL:**

```
/* Copyright (c) 2015, Google Inc.
 *
 * Permission to use, copy, modify, and/or distribute this software for any
 * purpose with or without fee is hereby granted, provided that the above
 * copyright notice and this permission notice appear in all copies.
 *
 * THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
 * WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
 * MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY
 * SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
 * WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION
 * OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
 * CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE. */


The code in third_party/fiat carries the MIT license:
```

```
Copyright (c) 2015-2016 the fiat-crypto authors (see
https://github.com/mit-plv/fiat-crypto/blob/master/AUTHORS).

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.


The code in third_party/jitterentropy is distributed under the 3-Clause BSD
License. Amazon expressly elects to distribute the package under the 3-Clause
BSD License and NOT under GNU General Public License Version 2:

Copyright (C) 2017 - 2021, Stephan Mueller <smueller@chronox.de>

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
1. Redistributions of source code must retain the above copyright
   notice, and the entire permission notice in its entirety,
   including the disclaimer of warranties.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote
   products derived from this software without specific prior
   written permission.


The code in crypto/kyber/pqcrystals-kyber_kyber512_ref and
crypto/ml_kem/ml_kem_ipd_ref_common carries the Public Domain license:

Public Domain (https://creativecommons.org/share-your-work/public-domain/cc0/)

For Keccak and AES we are using public-domain
code from sources and by authors listed in
comments on top of the respective files.
```

**Licenses for support code**

Parts of the TLS test suite are under the Go license (BSD-3-Clause). This code is not included in BoringSSL (i.e. libcrypto and libssl) when compiled, however, so distributing code linked against BoringSSL does not trigger this license:

Copyright (c) 2009 The Go Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

BoringSSL uses the Chromium test infrastructure to run a continuous build, trybots etc. The scripts which manage this, and the script for generating build metadata, are under the Chromium license (BSD-3-Clause). Distributing code linked against BoringSSL does not trigger this license.

Copyright 2015 The Chromium Authors. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED

WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

**Apache 2.0 license for AWS-LC content**

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).
```

"Derivative Works" shall mean any work, whether in Source or Object
form, that is based on (or derived from) the Work and for which the
editorial revisions, annotations, elaborations, or other modifications
represent, as a whole, an original work of authorship. For the purposes
of this License, Derivative Works shall not include works that remain
separable from, or merely link (or bind by name) to the interfaces of,
the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including
the original version of the Work and any modifications or additions
to that Work or Derivative Works thereof, that is intentionally
submitted to Licensor for inclusion in the Work by the copyright owner
or by an individual or Legal Entity authorized to submit on behalf of
the copyright owner. For the purposes of this definition, "submitted"
means any form of electronic, verbal, or written communication sent
to the Licensor or its representatives, including but not limited to
communication on electronic mailing lists, source code control systems,
and issue tracking systems that are managed by, or on behalf of, the
Licensor for the purpose of discussing and improving the Work, but
excluding communication that is conspicuously marked or otherwise
designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity
on behalf of whom a Contribution has been received by Licensor and
subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without

```
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.
```

```
   7. Disclaimer of Warranty. Unless required by applicable law or
      agreed to in writing, Licensor provides the Work (and each
      Contributor provides its Contributions) on an "AS IS" BASIS,
      WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
      implied, including, without limitation, any warranties or conditions
      of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
      PARTICULAR PURPOSE. You are solely responsible for determining the
      appropriateness of using or redistributing the Work and assume any
      risks associated with Your exercise of permissions under this License.

   8. Limitation of Liability. In no event and under no legal theory,
      whether in tort (including negligence), contract, or otherwise,
      unless required by applicable law (such as deliberate and grossly
      negligent acts) or agreed to in writing, shall any Contributor be
      liable to You for damages, including any direct, indirect, special,
      incidental, or consequential damages of any character arising as a
      result of this License or out of the use or inability to use the
      Work (including but not limited to damages for loss of goodwill,
      work stoppage, computer failure or malfunction, or any and all
      other commercial damages or losses), even if such Contributor
      has been advised of the possibility of such damages.

   9. Accepting Warranty or Additional Liability. While redistributing
      the Work or Derivative Works thereof, You may choose to offer,
      and charge a fee for, acceptance of support, warranty, indemnity,
      or other liability obligations and/or rights consistent with this
      License. However, in accepting such obligations, You may act only
      on Your own behalf and on Your sole responsibility, not on behalf
      of any other Contributor, and only if You agree to indemnify,
      defend, and hold each Contributor harmless for any liability
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS
```

**ISC license for AWS-LC content**

```
Copyright Amazon.com, Inc. or its affiliates.

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
```

```
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.
```

## AWS SDK for C++ 1.11.454

### AWS SDK for C++ Notice

```
AWS SDK for C++
Copyright Amazon.com, Inc. or its affiliates. All Rights Reserved.

This product includes software developed by
Amazon Technologies, Inc (http://www.amazon.com/).

**********************
THIRD PARTY COMPONENTS
**********************
This software includes third party software subject to the following copyrights:
- XML parsing and utility functions from TinyXml2 - Lee Thomason.
- JSON support from cJSON - Copyright (c) 2009-2017 Dave Gamble and cJSON contributors
- OpenSSL build files for cmake used for Android Builds - Copyright (C) 2007-2012
LuaDist and Copyright (C) 2013 Brian Sidebotham
- Android tool chain cmake build files - Copyright (c) 2010-2011, Ethan Rublee and
Copyright (c) 2011-2014, Andrey Kamaev

The licenses for these third party components are included in LICENSE.txt
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
```

```
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
```

```
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.
```

```
   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
```

```
      incurred by, or claims asserted against, such Contributor by reason
      of your accepting any such warranty or additional liability.

   END OF TERMS AND CONDITIONS

   APPENDIX: How to apply the Apache License to your work.

      To apply the Apache License to your work, attach the following
      boilerplate notice, with the fields enclosed by brackets "{}"
      replaced with your own identifying information. (Don't include
      the brackets!)  The text should be enclosed in the appropriate
      comment syntax for the file format. We also recommend that a
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright {yyyy} {name of copyright owner}

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

**LICENSE.txt File Information**

```
Apache License
Version 2.0, January 2004

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution
as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner
that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that
control, are controlled by, or are under common control with that entity. For the
purposes of this definition, "control" means (i) the power, direct or indirect, to
cause the direction or management of such entity, whether by contract or otherwise, or
(ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii)
```

beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their

Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

   1. You must give any other recipients of the Work or Derivative Works a copy of this License; and
   2. You must cause any modified files to carry prominent notices stating that You changed the files; and
   3. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
   4. If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing,

Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

Note: Other license terms may apply to certain, identified software files contained within or distributed with the accompanying software if such terms are included in the directory containing the accompanying software. Such other license terms will then apply in lieu of the terms of the software license above.

JSON processing code subject to the MIT License from
http://en.wikipedia.org/wiki/MIT_License
XML processing code is subject to the license at (www.grinninglizard.com)
Android build logic code is subject to the MIT License from
http://en.wikipedia.org/wiki/MIT_License

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

The Software shall be used for Good, not Evil.

```
THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED,
INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A
PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF
CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE
OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
```

**TinyXml2 Zlib License**

```
This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any
damages arising from the use of this software.

Permission is granted to anyone to use this software for any
purpose, including commercial applications, and to alter it and
redistribute it freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must
not claim that you wrote the original software. If you use this
software in a product, an acknowledgment in the product documentation
would be appreciated but is not required.

2. Altered source versions must be plainly marked as such, and
must not be misrepresented as being the original software.

3. This notice may not be removed or altered from any source
distribution.
```

---

## Warp 2.7.1

**BSD-2-Clause**

Copyright 2017-2024 Azul Systems, Inc.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE

DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

---

## aws-checksums v0.2.0

**Apache 2.0 License**

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
```

```
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.
```

```
4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
```

```
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "{}"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright {yyyy} {name of copyright owner}
```

```
   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

## libgcrypt v1.6.6

### Notice From README File

```
The library is distributed under the terms of the GNU Lesser
General Public License (LGPL); see the file COPYING.LIB for the
actual terms.  The helper programs (e.g. gcryptrnd and getrandom)
as well as the documentation are distributed under the terms of
the GNU General Public License (GPL); see the file COPYING for the
actual terms.  The file LICENSES has notices about contributions
that require these additional notices are distributed.

This library used to be available under the GPL - this was changed
with version 1.1.7 with the rationale that there are now many free
crypto libraries available and many of them come with capabilities
similar to Libcrypt.  We decided that to foster the use of
cryptography in Free Software an LGPLed library would make more
sense because it avoids problems due to license incompatibilities
between some Free Software licenses and the GPL.

Please note that in many cases it is better for a library to be
licensed under the GPL, so that it provides an advantage for free
software projects.  The Lesser GPL is so named because it does
less to protect the freedom of the users of the code that it
covers.  See http://www.gnu.org/philosophy/why-not-lgpl.html for
more explanation.
```

### AUTHORS File

```
Library: Libgcrypt
Homepage: https://www.gnu.org/software/libgcrypt/
Maintainer: Werner Koch <wk@gnupg.org>
Bug reports: http://bugs.gnupg.org
```

```
Security related bug reports: <security@gnupg.org>
End-of-life: 2017-06-30
License (library): LGPLv2.1+
License (manual and tools): GPLv2+

Libgcrypt is free software.  See the files COPYING.LIB and COPYING for
copying conditions, and LICENSES for notices about a few contributions
that require these additional notices to be distributed.  License
copyright years may be listed using range notation, e.g., 2000-2013,
indicating that every year in the range, inclusive, is a copyrightable
year that would otherwise be listed individually.


List of Copyright holders
=========================

  Copyright (C) 1989,1991-2016 Free Software Foundation, Inc.
  Copyright (C) 1994 X Consortium
  Copyright (C) 1996 L. Peter Deutsch
  Copyright (C) 1997 Werner Koch
  Copyright (C) 1998 The Internet Society
  Copyright (C) 1996-1999 Peter Gutmann, Paul Kendall, and Chris Wedgwood
  Copyright (C) 1996-2006 Peter Gutmann, Matt Thomlinson and Blake Coverett
  Copyright (C) 2003 Nikos Mavroyanopoulos
  Copyright (C) 2006-2007 NTT (Nippon Telegraph and Telephone Corporation)
  Copyright (C) 2012-2016 g10 Code GmbH
  Copyright (C) 2012 Simon Josefsson, Niels Möller
  Copyright (c) 2012 Intel Corporation
  Copyright (C) 2013 Christian Grothoff
  Copyright (C) 2013-2015 Jussi Kivilinna
  Copyright (C) 2013-2014 Dmitry Eremin-Solenikov


Authors with a FSF copyright assignment
=======================================

LIBGCRYPT       Werner Koch    2001-06-07
Assigns past and future changes.
Assignment for future changes terminated on 2012-12-04.
wk@gnupg.org
Designed and implemented Libgcrypt.

GNUPG   Matthew Skala          1998-08-10
Disclaims changes.
mskala@ansuz.sooke.bc.ca
Wrote cipher/twofish.c.

GNUPG   Natural Resources Canada    1998-08-11
Disclaims changes by Matthew Skala.

GNUPG   Michael Roth    Germany     1998-09-17
```

```
Assigns changes.
mroth@nessie.de
Wrote cipher/des.c.
Changes and bug fixes all over the place.

GNUPG   Niklas Hernaeus     1998-09-18
Disclaims changes.
nh@df.lth.se
Weak key patches.

GNUPG   Rémi Guyomarch      1999-05-25
Assigns past and future changes. (g10/compress.c, g10/encr-data.c,
g10/free-packet.c, g10/mdfilter.c, g10/plaintext.c, util/iobuf.c)
rguyom@mail.dotcom.fr

ANY     g10 Code GmbH           2001-06-07
Assignment for future changes terminated on 2012-12-04.
Code marked with ChangeLog entries of g10 Code employees.

LIBGCRYPT Timo Schulz           2001-08-31
Assigns past and future changes.
twoaday@freakmail.de

LIBGCRYPT Simon Josefsson       2002-10-25
Assigns past and future changes to FSF (cipher/{md4,crc}.c, CTR mode,
CTS/MAC flags, self test improvements)
simon@josefsson.org

LIBGCRYPT Moritz Schulte    2003-04-17
Assigns past and future changes.
moritz@g10code.com

GNUTLS  Nikolaos Mavrogiannopoulos  2003-11-22
nmav@gnutls.org
Original code for cipher/rfc2268.c.

LIBGCRYPT   The Written Word    2005-04-15
Assigns past and future changes. (new: src/libgcrypt.pc.in,
src/Makefile.am, src/secmem.c, mpi/hppa1.1/mpih-mul3.S,
mpi/hppa1.1/udiv-qrnnd.S, mpi/hppa1.1/mpih-mul2.S,
mpi/hppa1.1/mpih-mul1.S, mpi/Makefile.am, tests/prime.c,
tests/register.c, tests/ac.c, tests/basic.c, tests/tsexp.c,
tests/keygen.c, tests/pubkey.c, configure.ac, acinclude.m4)

LIBGCRYPT       Brad Hards       2006-02-09
Assigns Past and Future Changes
bradh@frogmouth.net
(Added OFB mode. Changed cipher/cipher.c, test/basic.c doc/gcrypt.tex.
 added SHA-224, changed cipher/sha256.c, added HMAC tests.)

LIBGCRYPT       Hye-Shik Chang   2006-09-07
```

```
Assigns Past and Future Changes
perky@freebsd.org
(SEED cipher)

LIBGCRYPT       Werner Dittmann  2009-05-20
Assigns Past and Future Changes
werner.dittmann@t-online.de
(mpi/amd64, tests/mpitests.c)

GNUPG           David Shaw
Assigns past and future changes.
dshaw@jabberwocky.com
(cipher/camellia-glue.c and related stuff)

LIBGCRYPT       Andrey Jivsov    2010-12-09
Assigns Past and Future Changes
openpgp@brainhub.org
(cipher/ecc.c and related files)

LIBGCRYPT       Ulrich Müller    2012-02-15
Assigns Past and Future Changes
ulm@gentoo.org
(Changes to cipher/idea.c and related files)

LIBGCRYPT       Vladimir Serbinenko  2012-04-26
Assigns Past and Future Changes
phcoder@gmail.com
(cipher/serpent.c)


Authors with a DCO
==================

Christian Aistleitner <christian@quelltextlich.at>
2013-02-26:20130226110144.GA12678@quelltextlich.at:

Christian Grothoff <christian@grothoff.org>
2013-03-21:514B5D8A.6040705@grothoff.org:

Dmitry Eremin-Solenikov <dbaryshkov@gmail.com>
2013-07-13:20130713144407.GA27334@fangorn.rup.mentorg.com:

Dmitry Kasatkin <dmitry.kasatkin@intel.com>
2012-12-14:50CAE2DB.80302@intel.com:

Jussi Kivilinna <jussi.kivilinna@mbnet.fi>
2012-11-15:20121115172331.150537dzb5i6jmy8@www.dalek.fi:

Jussi Kivilinna <jussi.kivilinna@iki.fi>
2013-05-06:5186720A.4090101@iki.fi:
```

```
Rafaël Carré <funman@videolan.org>
2012-04-20:4F91988B.1080502@videolan.org:

Sergey V. <sftp.mtuci@gmail.com>
2013-11-07:2066221.5IYa7Yq760@darkstar:

Tomáš Mráz <tm@t8m.info>
2012-04-16:1334571250.5056.52.camel@vespa.frost.loc:

Werner Koch <wk@gnupg.org> (g10 Code GmbH)
2012-12-05:87obi8u4h2.fsf@vigenere.g10code.de:


More credits
============

Libgcrypt used to be part of GnuPG but has been taken out into its own
package on 2000-12-21.

The ATH implementation (src/ath*) has been taken from GPGME and
relicensed to the LGPL by the copyright holder of GPGME (g10 Code
GmbH); it is now considered to be a part of Libgcrypt.

Most of the stuff in mpi has been taken from an old GMP library
version by Torbjorn Granlund <tege@noisy.tmg.se>.

The files cipher/rndunix.c and cipher/rndw32.c are based on those
files from Cryptlib.  Copyright Peter Gutmann, Paul Kendall, and Chris
Wedgwood 1996-1999.

The ECC code cipher/ecc.c was based on code by Sergi Blanch i Torne,
sergi at calcurco dot org.

The implementation of the Camellia cipher has been been taken from the
original NTT provided GPL source.

The CAVS testing program tests/cavs_driver.pl is not to be considered
a part of libgcrypt proper.  We distribute it merely for convenience.
It has a permissive license and is copyrighted by atsec information
security corporation.  See the file for details.

The file salsa20.c is based on D.J. Bernstein's public domain code and
taken from Nettle.  Copyright 2012 Simon Josefsson and Niels Möller.


 This file is free software; as a special exception the author gives
 unlimited permission to copy and/or distribute it, with or without
 modifications, as long as this notice is preserved.

 This file is distributed in the hope that it will be useful, but
 WITHOUT ANY WARRANTY, to the extent permitted by law; without even the
```

```
 implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```

**COPYING.LIB File**

```
                  GNU LESSER GENERAL PUBLIC LICENSE
                       Version 2.1, February 1999

 Copyright (C) 1991, 1999 Free Software Foundation, Inc.
     59 Temple Place, Suite 330, Boston, MA  02111-1307  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

  This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it.  You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations
below.

  When we speak of free software, we are referring to freedom of use,
not price.  Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

  To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights.  These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

  For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you.  You must make sure that they, too, receive or can get the source
code.  If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
```

```
it.  And you must show them these terms so they know their rights.

  We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

  To protect each distributor, we want to make it very clear that
there is no warranty for the free library.  Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.
^L
  Finally, software patents pose a constant threat to the existence of
any free program.  We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder.  Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

  Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License.  This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License.  We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

  When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library.  The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom.  The Lesser General
Public License permits more lax criteria for linking other code with
the library.

  We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License.  It also provides other free software developers Less
of an advantage over competing non-free programs.  These disadvantages
are the reason we use the ordinary General Public License for many
libraries.  However, the Lesser license provides advantages in certain
special circumstances.

  For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it
becomes a de-facto standard.  To achieve this, non-free programs must
be allowed to use the library.  A more frequent case is that a free
library does the same job as widely used non-free libraries.  In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.
```

```
  In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software.  For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

  The precise terms and conditions for copying, distribution and
modification follow.  Pay close attention to the difference between a
"work based on the library" and a "work that uses the library".  The
former contains code derived from the library, whereas the latter must
be combined with the library in order to run.
^L
                  GNU LESSER GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

  A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

  The "Library", below, refers to any such software library or work
which has been distributed under these terms.  A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language.  (Hereinafter, translation is
included without limitation in the term "modification".)

  "Source code" for a work means the preferred form of the work for
making modifications to it.  For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control
compilation and installation of the library.

  Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it).  Whether that is true depends on what the Library does
```

```
and what the program that uses the Library does.

  1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

  You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

  2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) The modified work must itself be a software library.

    b) You must cause the files modified to carry prominent notices
    stating that you changed the files and the date of any change.

    c) You must cause the whole of the work to be licensed at no
    charge to all third parties under the terms of this License.

    d) If a facility in the modified Library refers to a function or a
    table of data to be supplied by an application program that uses
    the facility, other than as an argument passed when the facility
    is invoked, then you must make a good faith effort to ensure that,
    in the event an application does not supply such function or
    table, the facility still operates, and performs whatever part of
    its purpose remains meaningful.

    (For example, a function in a library to compute square roots has
    a purpose that is entirely well-defined independent of the
    application.  Therefore, Subsection 2d requires that any
    application-supplied function or table used by this function must
    be optional: if the application does not supply it, the square
    root function must still compute square roots.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
```

```
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library.  To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License.  (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.)  Do not make any other change in
these notices.
^L
  Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

  This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

  4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

  If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

  5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library".  Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

  However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library".  The executable is therefore covered by this License.
```

```
Section 6 states terms for distribution of such executables.

  When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library.  The
threshold for this to be true is not precisely defined by law.

  If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work.  (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

  Otherwise, if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.
^L
  6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

  You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License.  You must supply a copy of this License.  If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of this License.  Also, you must do one
of these things:

    a) Accompany the work with the complete corresponding
    machine-readable source code for the Library including whatever
    changes were used in the work (which must be distributed under
    Sections 1 and 2 above); and, if the work is an executable linked
    with the Library, with the complete machine-readable "work that
    uses the Library", as object code and/or source code, so that the
    user can modify the Library and then relink to produce a modified
    executable containing the modified Library.  (It is understood
    that the user who changes the contents of definitions files in the
    Library will not necessarily be able to recompile the application
    to use the modified definitions.)

    b) Use a suitable shared library mechanism for linking with the
    Library.  A suitable mechanism is one that (1) uses at run time a
    copy of the library already present on the user's computer system,
```

```
    rather than copying library functions into the executable, and (2)
    will operate properly with a modified version of the library, if
    the user installs one, as long as the modified version is
    interface-compatible with the version that the work was made with.

    c) Accompany the work with a written offer, valid for at least
    three years, to give the same user the materials specified in
    Subsection 6a, above, for a charge no more than the cost of
    performing this distribution.

    d) If distribution of the work is made by offering access to copy
    from a designated place, offer equivalent access to copy the above
    specified materials from the same place.

    e) Verify that the user has already received a copy of these
    materials or that you have already sent this user a copy.

  For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it.  However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

  It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system.  Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.
^L
  7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

    a) Accompany the combined library with a copy of the same work
    based on the Library, uncombined with any other library
    facilities.  This must be distributed under the terms of the
    Sections above.

    b) Give prominent notice with the combined library of the fact
    that part of it is a work based on the Library, and explaining
    where to find the accompanying uncombined form of the same work.

  8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License.  Any
attempt otherwise to copy, modify, sublicense, link with, or
```

```
distribute the Library is void, and will automatically terminate your
rights under this License.  However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

  9. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Library or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

  10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.
^L
  11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all.  For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply, and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.
```

```
This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License
may add an explicit geographical distribution limitation excluding those
countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.  If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation.  If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.
^L
  14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission.  For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this.  Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

                            NO WARRANTY

  15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

  16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
```

```
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

                     END OF TERMS AND CONDITIONS
^L
           How to Apply These Terms to Your New Libraries

  If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change.  You can do so by permitting
redistribution under these terms (or, alternatively, under the terms
of the ordinary General Public License).

  To apply these terms, attach the following notices to the library.
It is safest to attach them to the start of each source file to most
effectively convey the exclusion of warranty; and each file should
have at least the "copyright" line and a pointer to where the full
notice is found.


    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.

    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307  USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or
your school, if any, to sign a "copyright disclaimer" for the library,
if necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library `Frob' (a library for tweaking knobs) written by James
  Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice
```

```
That's all there is to it!
```

**COPYING File**

```
            GNU GENERAL PUBLIC LICENSE
               Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.
     59 Temple Place, Suite 330, Boston, MA  02111-1307  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

  To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
```

```
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

            GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

  1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.
```

```
    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,
```

```
    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
```

```
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.
```

```
  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

             END OF TERMS AND CONDITIONS

        How to Apply These Terms to Your New Programs

  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.
```

```
    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.

    You should have received a copy of the GNU General Public License
    along with this program; if not, write to the Free Software
    Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA  02111-1307  USA


Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year  name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
  Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Library General
Public License instead of this License.
```

**LICENSES File**

```
Additional license notices for Libgcrypt.                    -*- org -*-

This file contains the copying permission notices for various files in
the Libgcrypt distribution which are not covered by the GNU Lesser
General Public License (LGPL) or the GNU General Public License (GPL).

These notices all require that a copy of the notice be included
```

```
in the accompanying documentation and be distributed with binary
distributions of the code, so be sure to include this file along
with any binary distributions derived from the GNU C Library.

* BSD_3Clause

  For files:
  - cipher/sha256-ssse3-amd64.S
  - cipher/sha512-avx-amd64.S
  - cipher/sha512-avx2-bmi2-amd64.S
  - cipher/sha512-ssse3-amd64.S

#+begin_quote
  Copyright (c) 2012, Intel Corporation

  All rights reserved.

  Redistribution and use in source and binary forms, with or without
  modification, are permitted provided that the following conditions are
  met:

  * Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.

  * Redistributions in binary form must reproduce the above copyright
    notice, this list of conditions and the following disclaimer in the
    documentation and/or other materials provided with the
    distribution.

  * Neither the name of the Intel Corporation nor the names of its
    contributors may be used to endorse or promote products derived from
    this software without specific prior written permission.


  THIS SOFTWARE IS PROVIDED BY INTEL CORPORATION "AS IS" AND ANY
  EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
  IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
  PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL INTEL CORPORATION OR
  CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
  EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
  PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR
  PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
  LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
  NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
  SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#+end_quote

* Simple permissive licenses

  For files:
  - cipher/crc.c
```

```
#+begin_quote
  Copyright (c) 1996 L. Peter Deutsch

  Permission is granted to copy and distribute this document for
  any purpose and without charge, including translations into
  other languages and incorporation into compilations, provided
  that the copyright notice and this notice are preserved, and
  that any substantive changes or deletions from the original are
  clearly marked.
#+end_quote

* IETF permissive licenses

  For files:
  - cipher/crc.c

#+begin_quote
  Copyright (C) The Internet Society (1998).  All Rights Reserved.

  This document and translations of it may be copied and furnished
  to others, and derivative works that comment on or otherwise
  explain it or assist in its implementation may be prepared,
  copied, published and distributed, in whole or in part, without
  restriction of any kind, provided that the above copyright notice
  and this paragraph are included on all such copies and derivative
  works.  However, this document itself may not be modified in any
  way, such as by removing the copyright notice or references to
  the Internet Society or other Internet organizations, except as
  needed for the purpose of developing Internet standards in which
  case the procedures for copyrights defined in the Internet
  Standards process must be followed, or as required to translate
  it into languages other than English.

  The limited permissions granted above are perpetual and will not be
  revoked by the Internet Society or its successors or assigns.

  This document and the information contained herein is provided on
  an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET
  ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR
  IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE
  OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY
  IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR
  PURPOSE.
#+end_quote

* X License

  For files:
  - install.sh
```

```
#+begin_quote
  Copyright (C) 1994 X Consortium

  Permission is hereby granted, free of charge, to any person obtaining a copy
  of this software and associated documentation files (the "Software"), to
  deal in the Software without restriction, including without limitation the
  rights to use, copy, modify, merge, publish, distribute, sublicense, and/or
  sell copies of the Software, and to permit persons to whom the Software is
  furnished to do so, subject to the following conditions:

  The above copyright notice and this permission notice shall be included in
  all copies or substantial portions of the Software.

  THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
  IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
  FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL THE
  X CONSORTIUM BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN
  AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNEC-
  TION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

  Except as contained in this notice, the name of the X Consortium shall not
  be used in advertising or otherwise to promote the sale, use or other deal-
  ings in this Software without prior written authorization from the X Consor-
  tium.
#+end_quote
```

## libgpg-error v1.11

### Notice From README File

```
libgpg-error is free software; you can redistribute it and/or modify
it under the terms of the GNU Lesser General Public License as
published by the Free Software Foundation; either version 2.1 of the
License, or (at your option) any later version.  See the file
COPYING.LIB for copyright and warranty information.  See the file
AUTHORS for a list of authors and important mail addresses.

However, some files (for example src/mkerrnos.awk) used in the build
process of the library are covered by a different license.  Please see
the header of these files and the file COPYING for copyright and
warranty information on these files.  A special exception in the
copyright license of these files makes sure that the output in the
build process, which is used in libgpg-error, is not affected by the
GPL.
```

**AUTHORS File**

```
Package: libgpg-error
Maintainer: Werner Koch <wk@gnupg.org>
Bug reports: bug-gnupg@gnupg.org
Mailing list: gnupg-devel@gnupg.org
Security related bug reports: security@gnupg.org
License (library): LGPLv2.1+
License (tools): GPLv2+ with exception


Aron Xu <happyaron.xu at gmail.com>
 - TRANSLATION [zh_CN]

Clytie Siddall <clytie at riverland.net.au>
 - TRANSLATION [vi]

Daniel Nylander <po at danielnylander.se>
 - TRANSLATION [sv]

David Prévot <david at tilapin.org>
 - TRANSLATION [fr]

Felipe Castro <fefcas at gmail.com>
 - TRANSLATION [eo]

Francesco Groccia <fgr at anche.no>
 - TRANSLATION [it]

Freek de Kruijf <f.de.kruijf at gmail.com>
 - TRANSLATION [nl]

g10 Code GmbH <code at g10code.com>
 - Design and implementation.

Jakub Bogusz <qboosh at pld-linux.org>
 - TRANSLATION [pl]

Joe Hansen <joedalton2 at yahoo.dk>
 - TRANSLATION [da]

Laurentiu Buzdugan <lbuz at rolix.org>
 - TRANSLATION [ro]

Petr Pisar <petr.pisar at atlas.cz>
 - TRANSLATION [cs]

Robert Schiele <rschiele at uni-mannheim.de>
 - libgpg-error.spec

Stephane Roy <sroy at j2n.net>
```

```
 - TRANSLATION [fr]

Takeshi Hamasaki <hmatrjp at users.sourceforge.jp>
 - TRANSLATION [fp]

Werner Koch <wk at gnupg.org>
 - TRANSLATION [de]

Yasuaki Taniguchi <yasuakit at gmail.com>
 - TRANSLATION [fp]

Yuri Chornoivan <yurchor at ukr.net>
 - TRANSLATION [uk]


 Copyright 2003, 2004, 2005, 2006, 2007, 2013 g10 Code GmbH

 This file is free software; as a special exception the author gives
 unlimited permission to copy and/or distribute it, with or without
 modifications, as long as this notice is preserved.

 This file is distributed in the hope that it will be useful, but
 WITHOUT ANY WARRANTY, to the extent permitted by law; without even the
 implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.
```

**License Header of Building Tools**

```
Copyright (C) 2003, 2004 g10 Code GmbH

This program is free software; you can redistribute it and/or
modify it under the terms of the GNU General Public License as
published by the Free Software Foundation; either version 2 of
the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
General Public License for more details.

You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software
Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA.

As a special exception, g10 Code GmbH gives unlimited permission to
copy, distribute and modify the C source files that are the output
of mkerrnos.awk.  You need not follow the terms of the GNU General
Public License when using or distributing such scripts, even though
portions of the text of mkerrnos.awk appear in them.  The GNU
General Public License (GPL) does govern all other use of the material
that constitutes the mkerrnos.awk program.
```

```
Certain portions of the mkerrnos.awk source text are designed to be
copied (in certain cases, depending on the input) into the output of
mkerrnos.awk.  We call these the "data" portions.  The rest of the
mkerrnos.awk source text consists of comments plus executable code
that decides which of the data portions to output in any given case.
We call these comments and executable code the "non-data" portions.
mkerrnos.h never copies any of the non-data portions into its output.

This special exception to the GPL applies to versions of mkerrnos.awk
released by g10 Code GmbH.  When you make and distribute a modified version
of mkerrnos.awk, you may extend this special exception to the GPL to
apply to your modified version as well, *unless* your modified version
has the potential to copy into its output some of the text that was the
non-data portion of the version that you started with.  (In other words,
unless your change moves or copies text from the non-data portions to the
data portions.)  If your modification has such potential, you must delete
any notice of this special exception to the GPL from your modified version.
```

**COPYING.LIB File**

```
                  GNU LESSER GENERAL PUBLIC LICENSE
                       Version 2.1, February 1999

 Copyright (C) 1991, 1999 Free Software Foundation, Inc.
    51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

  This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it.  You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations
below.

  When we speak of free software, we are referring to freedom of use,
not price.  Our General Public Licenses are designed to make sure that
```

```
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

  To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights.  These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

  For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you.  You must make sure that they, too, receive or can get the source
code.  If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it.  And you must show them these terms so they know their rights.

  We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

  To protect each distributor, we want to make it very clear that
there is no warranty for the free library.  Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

  Finally, software patents pose a constant threat to the existence of
any free program.  We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder.  Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

  Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License.  This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License.  We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

  When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library.  The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom.  The Lesser General
Public License permits more lax criteria for linking other code with
the library.
```

```
  We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License.  It also provides other free software developers Less
of an advantage over competing non-free programs.  These disadvantages
are the reason we use the ordinary General Public License for many
libraries.  However, the Lesser license provides advantages in certain
special circumstances.

  For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it
becomes a de-facto standard.  To achieve this, non-free programs must
be allowed to use the library.  A more frequent case is that a free
library does the same job as widely used non-free libraries.  In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.

  In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software.  For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

  The precise terms and conditions for copying, distribution and
modification follow.  Pay close attention to the difference between a
"work based on the library" and a "work that uses the library".  The
former contains code derived from the library, whereas the latter must
be combined with the library in order to run.

                  GNU LESSER GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

  A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

  The "Library", below, refers to any such software library or work
which has been distributed under these terms.  A "work based on the
Library" means either the Library or any derivative work under
```

```
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language.  (Hereinafter, translation is
included without limitation in the term "modification".)

  "Source code" for a work means the preferred form of the work for
making modifications to it.  For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control
compilation and installation of the library.

  Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it).  Whether that is true depends on what the Library does
and what the program that uses the Library does.

  1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

  You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

  2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) The modified work must itself be a software library.

    b) You must cause the files modified to carry prominent notices
    stating that you changed the files and the date of any change.

    c) You must cause the whole of the work to be licensed at no
    charge to all third parties under the terms of this License.

    d) If a facility in the modified Library refers to a function or a
    table of data to be supplied by an application program that uses
    the facility, other than as an argument passed when the facility
    is invoked, then you must make a good faith effort to ensure that,
    in the event an application does not supply such function or
    table, the facility still operates, and performs whatever part of
    its purpose remains meaningful.
```

```
    (For example, a function in a library to compute square roots has
    a purpose that is entirely well-defined independent of the
    application.  Therefore, Subsection 2d requires that any
    application-supplied function or table used by this function must
    be optional: if the application does not supply it, the square
    root function must still compute square roots.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library.  To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License.  (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.)  Do not make any other change in
these notices.

  Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

  This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

  4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.
```

```
  If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

  5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library".  Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

  However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library".  The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

  When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library.  The
threshold for this to be true is not precisely defined by law.

  If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work.  (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

  Otherwise, if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

  6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

  You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License.  You must supply a copy of this License.  If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of this License.  Also, you must do one
```

```
of these things:

    a) Accompany the work with the complete corresponding
    machine-readable source code for the Library including whatever
    changes were used in the work (which must be distributed under
    Sections 1 and 2 above); and, if the work is an executable linked
    with the Library, with the complete machine-readable "work that
    uses the Library", as object code and/or source code, so that the
    user can modify the Library and then relink to produce a modified
    executable containing the modified Library.  (It is understood
    that the user who changes the contents of definitions files in the
    Library will not necessarily be able to recompile the application
    to use the modified definitions.)

    b) Use a suitable shared library mechanism for linking with the
    Library.  A suitable mechanism is one that (1) uses at run time a
    copy of the library already present on the user's computer system,
    rather than copying library functions into the executable, and (2)
    will operate properly with a modified version of the library, if
    the user installs one, as long as the modified version is
    interface-compatible with the version that the work was made with.

    c) Accompany the work with a written offer, valid for at least
    three years, to give the same user the materials specified in
    Subsection 6a, above, for a charge no more than the cost of
    performing this distribution.

    d) If distribution of the work is made by offering access to copy
    from a designated place, offer equivalent access to copy the above
    specified materials from the same place.

    e) Verify that the user has already received a copy of these
    materials or that you have already sent this user a copy.

  For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it.  However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

  It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system.  Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

  7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
```

```
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

    a) Accompany the combined library with a copy of the same work
    based on the Library, uncombined with any other library
    facilities.  This must be distributed under the terms of the
    Sections above.

    b) Give prominent notice with the combined library of the fact
    that part of it is a work based on the Library, and explaining
    where to find the accompanying uncombined form of the same work.

  8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License.  Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License.  However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

  9. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Library or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

  10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

  11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all.  For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.
```

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply, and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License
may add an explicit geographical distribution limitation excluding those
countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.  If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation.  If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

  14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission.  For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this.  Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

                            NO WARRANTY

```
  15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

  16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

                     END OF TERMS AND CONDITIONS

           How to Apply These Terms to Your New Libraries

  If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change.  You can do so by permitting
redistribution under these terms (or, alternatively, under the terms
of the ordinary General Public License).

  To apply these terms, attach the following notices to the library.
It is safest to attach them to the start of each source file to most
effectively convey the exclusion of warranty; and each file should
have at least the "copyright" line and a pointer to where the full
notice is found.


    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.
```

```
    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or
your school, if any, to sign a "copyright disclaimer" for the library,
if necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library `Frob' (a library for tweaking knobs) written by James
  Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice

That's all there is to it!
```

**COPYING File**

```
            GNU GENERAL PUBLIC LICENSE
               Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.
     51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

  To protect your rights, we need to make restrictions that forbid
```

```
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

            GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

  1. You may copy and distribute verbatim copies of the Program's
```

```
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
```

```
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,

    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
```

```
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
```

```
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

             END OF TERMS AND CONDITIONS

        How to Apply These Terms to Your New Programs
```

```
  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.

    You should have received a copy of the GNU General Public License
    along with this program; if not, write to the Free Software
    Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA


Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year  name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
  Ty Coon, President of Vice
```

```
This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Library General
Public License instead of this License.
```

## lz4 v1.9.4

### lz4 License

```
This repository uses 2 different licenses :
- all files in the `lib` directory use a BSD 2-Clause license
- all other files use a GPLv2 license, unless explicitly stated otherwise

Relevant license is reminded at the top of each source file,
and with presence of COPYING or LICENSE file in associated directories.

This model is selected to emphasize that
files in the `lib` directory are designed to be included into 3rd party applications,
while all other files, in `programs`, `tests` or `examples`,
are intended to be used "as is", as part of their intended scenarios,
with no intention to support 3rd party integration use cases.
```

### lz4 Library License

```
LZ4 Library
Copyright (c) 2011-2020, Yann Collet
All rights reserved.

Redistribution and use in source and binary forms, with or without modification,
are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this
  list of conditions and the following disclaimer in the documentation and/or
  other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
```

```
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

#### xxHash Library License

```
xxHash - Extremely Fast Hash algorithm
Header File
Copyright (C) 2012-2016, Yann Collet.

BSD 2-Clause License (http://www.opensource.org/licenses/bsd-license.php)

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

You can contact the author at :
- xxHash source repository : https://github.com/Cyan4973/xxHash
```

#### lz4 file programs/lz4io.c License

```
LZ4io.c - LZ4 File/Stream Interface
Copyright (C) Yann Collet 2011-2020

GPL v2 License

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
```

```
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

You can contact the author at :
- LZ4 source repository : https://github.com/lz4/lz4
- LZ4 public forum : https://groups.google.com/forum/#!forum/lz4c

Note : this is stand-alone program.
It is not part of LZ4 compression library, it is a user code of the LZ4 library.
- The license of LZ4 library is BSD.
- The license of xxHash library is BSD.
- The license of this source file is GPLv2.

----------------------------------------

                    GNU GENERAL PUBLIC LICENSE
                       Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.
```

```
  To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

                    GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.
```

```
  1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
```

```
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,

    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
```

```
signed it.  However, nothing else grants you permission to modify or
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
```

```
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                            NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

                     END OF TERMS AND CONDITIONS

            How to Apply These Terms to Your New Programs
```

```
  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.

    You should have received a copy of the GNU General Public License along
    with this program; if not, write to the Free Software Foundation, Inc.,
    51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
  Ty Coon, President of Vice
```

```
This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
```

## s2n v1.5.7

### s2n Notice

```
Copyright 2014-2015 Amazon.com, Inc. or its affiliates. All Rights Reserved.
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

   TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

   1. Definitions.

      "License" shall mean the terms and conditions for use, reproduction,
      and distribution as defined by Sections 1 through 9 of this document.

      "Licensor" shall mean the copyright owner or entity authorized by
      the copyright owner that is granting the License.

      "Legal Entity" shall mean the union of the acting entity and all
      other entities that control, are controlled by, or are under common
      control with that entity. For the purposes of this definition,
      "control" means (i) the power, direct or indirect, to cause the
      direction or management of such entity, whether by contract or
      otherwise, or (ii) ownership of fifty percent (50%) or more of the
      outstanding shares, or (iii) beneficial ownership of such entity.

      "You" (or "Your") shall mean an individual or Legal Entity
      exercising permissions granted by this License.

      "Source" form shall mean the preferred form for making modifications,
      including but not limited to software source code, documentation
      source, and configuration files.

      "Object" form shall mean any form resulting from mechanical
      transformation or translation of a Source form, including but
```

```
      not limited to compiled object code, generated documentation,
      and conversions to other media types.

      "Work" shall mean the work of authorship, whether in Source or
      Object form, made available under the License, as indicated by a
      copyright notice that is included in or attached to the work
      (an example is provided in the Appendix below).

      "Derivative Works" shall mean any work, whether in Source or Object
      form, that is based on (or derived from) the Work and for which the
      editorial revisions, annotations, elaborations, or other modifications
      represent, as a whole, an original work of authorship. For the purposes
      of this License, Derivative Works shall not include works that remain
      separable from, or merely link (or bind by name) to the interfaces of,
      the Work and Derivative Works thereof.

      "Contribution" shall mean any work of authorship, including
      the original version of the Work and any modifications or additions
      to that Work or Derivative Works thereof, that is intentionally
      submitted to Licensor for inclusion in the Work by the copyright owner
      or by an individual or Legal Entity authorized to submit on behalf of
      the copyright owner. For the purposes of this definition, "submitted"
      means any form of electronic, verbal, or written communication sent
      to the Licensor or its representatives, including but not limited to
      communication on electronic mailing lists, source code control systems,
      and issue tracking systems that are managed by, or on behalf of, the
      Licensor for the purpose of discussing and improving the Work, but
      excluding communication that is conspicuously marked or otherwise
      designated in writing by the copyright owner as "Not a Contribution."

      "Contributor" shall mean Licensor and any individual or Legal Entity
      on behalf of whom a Contribution has been received by Licensor and
      subsequently incorporated within the Work.

   2. Grant of Copyright License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      copyright license to reproduce, prepare Derivative Works of,
      publicly display, publicly perform, sublicense, and distribute the
      Work and such Derivative Works in Source or Object form.

   3. Grant of Patent License. Subject to the terms and conditions of
      this License, each Contributor hereby grants to You a perpetual,
      worldwide, non-exclusive, no-charge, royalty-free, irrevocable
      (except as stated in this section) patent license to make, have made,
      use, offer to sell, sell, import, and otherwise transfer the Work,
      where such license applies only to those patent claims licensable
      by such Contributor that are necessarily infringed by their
      Contribution(s) alone or by combination of their Contribution(s)
      with the Work to which such Contribution(s) was submitted. If You
      institute patent litigation against any entity (including a
```

```
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
```

```
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
```

```
      file or class name and description of purpose be included on the
      same "printed page" as the copyright notice for easier
      identification within third-party archives.

   Copyright [yyyy] [name of copyright owner]

   Licensed under the Apache License, Version 2.0 (the "License");
   you may not use this file except in compliance with the License.
   You may obtain a copy of the License at

       http://www.apache.org/licenses/LICENSE-2.0

   Unless required by applicable law or agreed to in writing, software
   distributed under the License is distributed on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
   See the License for the specific language governing permissions and
   limitations under the License.
```

# Module java.base

## ASM Bytecode Manipulation Framework v9.3

### ASM License

```
Copyright (c) 2000-2011 France Télécom
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.

3. Neither the name of the copyright holders nor the names of its
   contributors may be used to endorse or promote products derived from
   this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
```

```
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
THE POSSIBILITY OF SUCH DAMAGE.
```

## Bert Belder: wepoll v 1.5.8

### wepoll License

```
wepoll - epoll for Windows
https://github.com/piscisaureus/wepoll

Copyright 2012-2020, Bert Belder <bertbelder@gmail.com>
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  * Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.

  * Redistributions in binary form must reproduce the above copyright
    notice, this list of conditions and the following disclaimer in the
    documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

## Bouncy Castle ASN1 Utils FIPS library v2.1.5

### Bouncy Castle License

```
Copyright (c) 2000 - 2024 The Legion of the Bouncy Castle Inc.
```

```
(https://www.bouncycastle.org)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Bouncy Castle FIPS provider v2.1.2

### Bouncy Castle License

```
Copyright (c) 2000 - 2024 The Legion of the Bouncy Castle Inc.
(https://www.bouncycastle.org)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Bouncy Castle PKIX FIPS library v2.1.10

### Bouncy Castle License

```
Copyright (c) 2000 - 2024 The Legion of the Bouncy Castle Inc.
(https://www.bouncycastle.org)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Bouncy Castle TLS/JSSE FIPS provider v2.1.22

### Bouncy Castle License

```
Copyright (c) 2000 - 2024 The Legion of the Bouncy Castle Inc.
(https://www.bouncycastle.org)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
```

```
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Bouncy Castle provider for JDK 1.8 and up v1.80

### Bouncy Castle License

```
Copyright (c) 2000 - 2024 The Legion of the Bouncy Castle Inc.
(https://www.bouncycastle.org)

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal in
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## CRIU (Checkpoint/Restore In Userspace) v3.17.1

### CRIU License

```
This software is licensed under the GNU GENERAL PUBLIC LICENCE Version
2. Except that any software in the lib/ directory is for the creation of a
linkable library to the tools and is licensed under the GNU LESSER GENERAL
PUBLIC LICENCE Version 2.1.  Contributing Authors agree that their code is
submitted under the licence appropriate for its location within the source
tree (GPL except for LGPL in lib/) and agree that any future patches, provided
they are accepted into the project, may change the licence of their code from
GPL to LGPL by moving pieces of it into lib/ or LGPL to GPL by moving pieces
of it out of lib/

Note that the only valid version of the GPL is THIS particular version
of the license (ie v2, not v2.2 or v3.x or whatever), unless explicitly
otherwise stated.
```

```
----------------------------------------

            GNU GENERAL PUBLIC LICENSE
               Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.
                       51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

  To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.
```

```
  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

            GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

  1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
```

```
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,

    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
```

```
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
```

```
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
```

```
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

             END OF TERMS AND CONDITIONS

        How to Apply These Terms to Your New Programs

  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.
```

```
    You should have received a copy of the GNU General Public License
    along with this program; if not, write to the Free Software
    Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA


Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
  Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Library General
Public License instead of this License.

---------------------------------------

                  GNU LESSER GENERAL PUBLIC LICENSE
                       Version 2.1, February 1999

 Copyright (C) 1991, 1999 Free Software Foundation, Inc.
 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]
```

```
                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

  This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it.  You
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

  When we speak of free software, we are referring to freedom of use,
not price.  Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

  To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights.  These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

  For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you.  You must make sure that they, too, receive or can get the source
code.  If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it.  And you must show them these terms so they know their rights.

  We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

  To protect each distributor, we want to make it very clear that
there is no warranty for the free library.  Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

  Finally, software patents pose a constant threat to the existence of
any free program.  We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder.  Therefore, we insist that
any patent license obtained for a version of the library must be
```

```
consistent with the full freedom of use specified in this license.

  Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License.  This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License.  We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

  When a program is linked with a library, whether statically or using
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library.  The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom.  The Lesser General
Public License permits more lax criteria for linking other code with
the library.

  We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License.  It also provides other free software developers Less
of an advantage over competing non-free programs.  These disadvantages
are the reason we use the ordinary General Public License for many
libraries.  However, the Lesser license provides advantages in certain
special circumstances.

  For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard.  To achieve this, non-free programs must be
allowed to use the library.  A more frequent case is that a free
library does the same job as widely used non-free libraries.  In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.

  In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software.  For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

  The precise terms and conditions for copying, distribution and
modification follow.  Pay close attention to the difference between a
"work based on the library" and a "work that uses the library".  The
former contains code derived from the library, whereas the latter must
be combined with the library in order to run.
```

```
                  GNU LESSER GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

  A "library" means a collection of software functions and/or data
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

  The "Library", below, refers to any such software library or work
which has been distributed under these terms.  A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language.  (Hereinafter, translation is
included without limitation in the term "modification".)

  "Source code" for a work means the preferred form of the work for
making modifications to it.  For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

  Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it).  Whether that is true depends on what the Library does
and what the program that uses the Library does.

  1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

  You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

  2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:
```

```
    a) The modified work must itself be a software library.

    b) You must cause the files modified to carry prominent notices
    stating that you changed the files and the date of any change.

    c) You must cause the whole of the work to be licensed at no
    charge to all third parties under the terms of this License.

    d) If a facility in the modified Library refers to a function or a
    table of data to be supplied by an application program that uses
    the facility, other than as an argument passed when the facility
    is invoked, then you must make a good faith effort to ensure that,
    in the event an application does not supply such function or
    table, the facility still operates, and performs whatever part of
    its purpose remains meaningful.

    (For example, a function in a library to compute square roots has
    a purpose that is entirely well-defined independent of the
    application.  Therefore, Subsection 2d requires that any
    application-supplied function or table used by this function must
    be optional: if the application does not supply it, the square
    root function must still compute square roots.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library.  To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License.  (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
```

```
that version instead if you wish.)  Do not make any other change in
these notices.

  Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

  This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.

  4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

  If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

  5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library".  Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

  However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library".  The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

  When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library.  The
threshold for this to be true is not precisely defined by law.

  If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work.  (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

  Otherwise, if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
```

```
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

  6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.

  You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License.  You must supply a copy of this License.  If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of this License.  Also, you must do one
of these things:

    a) Accompany the work with the complete corresponding
    machine-readable source code for the Library including whatever
    changes were used in the work (which must be distributed under
    Sections 1 and 2 above); and, if the work is an executable linked
    with the Library, with the complete machine-readable "work that
    uses the Library", as object code and/or source code, so that the
    user can modify the Library and then relink to produce a modified
    executable containing the modified Library.  (It is understood
    that the user who changes the contents of definitions files in the
    Library will not necessarily be able to recompile the application
    to use the modified definitions.)

    b) Use a suitable shared library mechanism for linking with the
    Library.  A suitable mechanism is one that (1) uses at run time a
    copy of the library already present on the user's computer system,
    rather than copying library functions into the executable, and (2)
    will operate properly with a modified version of the library, if
    the user installs one, as long as the modified version is
    interface-compatible with the version that the work was made with.

    c) Accompany the work with a written offer, valid for at
    least three years, to give the same user the materials
    specified in Subsection 6a, above, for a charge no more
    than the cost of performing this distribution.

    d) If distribution of the work is made by offering access to copy
    from a designated place, offer equivalent access to copy the above
    specified materials from the same place.

    e) Verify that the user has already received a copy of these
    materials or that you have already sent this user a copy.

  For an executable, the required form of the "work that uses the
```

```
Library" must include any data and utility programs needed for
reproducing the executable from it.  However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

  It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
accompany the operating system.  Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

  7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

    a) Accompany the combined library with a copy of the same work
    based on the Library, uncombined with any other library
    facilities.  This must be distributed under the terms of the
    Sections above.

    b) Give prominent notice with the combined library of the fact
    that part of it is a work based on the Library, and explaining
    where to find the accompanying uncombined form of the same work.

  8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License.  Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License.  However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

  9. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Library or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

  10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions.  You may not impose any further
```

```
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

  11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all.  For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded.  In such case, this License incorporates the limitation as if
written in the body of this License.

  13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.  If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
```

conditions either of that version or of any later version published by
the Free Software Foundation.  If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

  14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission.  For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this.  Our
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

                            NO WARRANTY

  15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

  16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

                     END OF TERMS AND CONDITIONS

           How to Apply These Terms to Your New Libraries

  If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change.  You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

  To apply these terms, attach the following notices to the library.  It is
safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

```
    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.

    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library `Frob' (a library for tweaking knobs) written by James Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice

That's all there is to it!

---------------------------------------

Copyright (c) 2020 The CRIU developers

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
```

```
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Cryptix AES v3.2.0

### Cryptix General License

```
Cryptix General License

Copyright (c) 1995-2005 The Cryptix Foundation Limited.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

  1. Redistributions of source code must retain the copyright notice,
     this list of conditions and the following disclaimer.

  2. Redistributions in binary form must reproduce the above copyright
     notice, this list of conditions and the following disclaimer in
     the documentation and/or other materials provided with the
     distribution.

THIS SOFTWARE IS PROVIDED BY THE CRYPTIX FOUNDATION LIMITED AND
CONTRIBUTORS ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE CRYPTIX FOUNDATION LIMITED OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE
OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN
IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

## International Components for Unicode (ICU4J) v72.1

### ICU4J License

```
COPYRIGHT AND PERMISSION NOTICE (ICU 58 and later)

Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in https://www.unicode.org/copyright.html.
```

```
Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.

---------------------

Third-Party Software Licenses

This section contains third-party software notices and/or additional
terms for licensed third-party software components included within ICU
libraries.

1. ICU License - ICU 1.8.1 to ICU 57.1

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2016 International Business Machines Corporation and others
All rights reserved.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, and/or sell copies of the Software, and to permit persons
to whom the Software is furnished to do so, provided that the above
```

```
copyright notice(s) and this permission notice appear in all copies of
the Software and that both the above copyright notice(s) and this
permission notice appear in supporting documentation.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT
OF THIRD PARTY RIGHTS. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR
HOLDERS INCLUDED IN THIS NOTICE BE LIABLE FOR ANY CLAIM, OR ANY
SPECIAL INDIRECT OR CONSEQUENTIAL DAMAGES, OR ANY DAMAGES WHATSOEVER
RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF
CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN
CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale, use
or other dealings in this Software without prior written authorization
of the copyright holder.

All trademarks and registered trademarks mentioned herein are the
property of their respective owners.

2. Chinese/Japanese Word Break Dictionary Data (cjdict.txt)

 #     The Google Chrome software developed by Google is licensed under
 # the BSD license. Other software included in this distribution is
 # provided under other licenses, as set forth below.
 #
 #  The BSD License
 #  http://opensource.org/licenses/bsd-license.php
 #  Copyright (C) 2006-2008, Google Inc.
 #
 #  All rights reserved.
 #
 #  Redistribution and use in source and binary forms, with or without
 # modification, are permitted provided that the following conditions are met:
 #
 #  Redistributions of source code must retain the above copyright notice,
 # this list of conditions and the following disclaimer.
 #  Redistributions in binary form must reproduce the above
 # copyright notice, this list of conditions and the following
 # disclaimer in the documentation and/or other materials provided with
 # the distribution.
 #  Neither the name of  Google Inc. nor the names of its
 # contributors may be used to endorse or promote products derived from
 # this software without specific prior written permission.
 #
 #
 #  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
 # CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
 # INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
```

```
# MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
# DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE
# LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
# CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
# SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
# BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
# LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING
# NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
# SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
#
#
#  The word list in cjdict.txt are generated by combining three word lists
# listed below with further processing for compound word breaking. The
# frequency is generated with an iterative training against Google web
# corpora.
#
#  * Libtabe (Chinese)
#    - https://sourceforge.net/project/?group_id=1519
#    - Its license terms and conditions are shown below.
#
#  * IPADIC (Japanese)
#    - http://chasen.aist-nara.ac.jp/chasen/distribution.html
#    - Its license terms and conditions are shown below.
#
#  ---------COPYING.libtabe ---- BEGIN--------------------
#
#  /*
#   * Copyright (c) 1999 TaBE Project.
#   * Copyright (c) 1999 Pai-Hsiang Hsiao.
#   * All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the TaBE Project nor the names of its
#   *   contributors may be used to endorse or promote products derived
#   *   from this software without specific prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
```

```
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  /*
#   * Copyright (c) 1999 Computer Systems and Communication Lab,
#   *                    Institute of Information Science, Academia
#       *                    Sinica. All rights reserved.
#   *
#   * Redistribution and use in source and binary forms, with or without
#   * modification, are permitted provided that the following conditions
#   * are met:
#   *
#   * . Redistributions of source code must retain the above copyright
#   *   notice, this list of conditions and the following disclaimer.
#   * . Redistributions in binary form must reproduce the above copyright
#   *   notice, this list of conditions and the following disclaimer in
#   *   the documentation and/or other materials provided with the
#   *   distribution.
#   * . Neither the name of the Computer Systems and Communication Lab
#   *   nor the names of its contributors may be used to endorse or
#   *   promote products derived from this software without specific
#   *   prior written permission.
#   *
#   * THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
#   * "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
#   * LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
#   * FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
#   * REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT,
#   * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
#   * (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
#   * SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
#   * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
#   * STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
#   * ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
#   * OF THE POSSIBILITY OF SUCH DAMAGE.
#   */
#
#  Copyright 1996 Chih-Hao Tsai @ Beckman Institute,
#      University of Illinois
#  c-tsai4@uiuc.edu  http://casper.beckman.uiuc.edu/~c-tsai4
#
#  ---------------COPYING.libtabe-----END--------------------------------
#
#
#  ---------------COPYING.ipadic-----BEGIN-------------------------------
#
```

```
#  Copyright 2000, 2001, 2002, 2003 Nara Institute of Science
#  and Technology.  All Rights Reserved.
#
#  Use, reproduction, and distribution of this software is permitted.
#  Any copy of this software, whether in its original form or modified,
#  must include both the above copyright notice and the following
#  paragraphs.
#
#  Nara Institute of Science and Technology (NAIST),
#  the copyright holders, disclaims all warranties with regard to this
#  software, including all implied warranties of merchantability and
#  fitness, in no event shall NAIST be liable for
#  any special, indirect or consequential damages or any damages
#  whatsoever resulting from loss of use, data or profits, whether in an
#  action of contract, negligence or other tortuous action, arising out
#  of or in connection with the use or performance of this software.
#
#  A large portion of the dictionary entries
#  originate from ICOT Free Software.  The following conditions for ICOT
#  Free Software applies to the current dictionary as well.
#
#  Each User may also freely distribute the Program, whether in its
#  original form or modified, to any third party or parties, PROVIDED
#  that the provisions of Section 3 ("NO WARRANTY") will ALWAYS appear
#  on, or be attached to, the Program, which is distributed substantially
#  in the same form as set out herein and that such intended
#  distribution, if actually made, will neither violate or otherwise
#  contravene any of the laws and regulations of the countries having
#  jurisdiction over the User or the intended distribution itself.
#
#  NO WARRANTY
#
#  The program was produced on an experimental basis in the course of the
#  research and development conducted during the project and is provided
#  to users as so produced on an experimental basis.  Accordingly, the
#  program is provided without any warranty whatsoever, whether express,
#  implied, statutory or otherwise.  The term "warranty" used herein
#  includes, but is not limited to, any warranty of the quality,
#  performance, merchantability and fitness for a particular purpose of
#  the program and the nonexistence of any infringement or violation of
#  any right of any third party.
#
#  Each user of the program will agree and understand, and be deemed to
#  have agreed and understood, that there is no warranty whatsoever for
#  the program and, accordingly, the entire risk arising from or
#  otherwise connected with the program is assumed by the user.
#
#  Therefore, neither ICOT, the copyright holder, or any other
#  organization that participated in or was otherwise related to the
#  development of the program and their respective officials, directors,
#  officers and other employees shall be held liable for any and all
```

```
 #  damages, including, without limitation, general, special, incidental
 #  and consequential damages, arising out of or otherwise in connection
 #  with the use or inability to use the program or any product, material
 #  or result produced or otherwise obtained by using the program,
 #  regardless of whether they have been advised of, or otherwise had
 #  knowledge of, the possibility of such damages at any time during the
 #  project or thereafter.  Each user will be deemed to have agreed to the
 #  foregoing by his or her commencement of use of the program.  The term
 #  "use" as used herein includes, but is not limited to, the use,
 #  modification, copying and distribution of the program and the
 #  production of secondary products from the program.
 #
 #  In the case where the program, whether in its original form or
 #  modified, was distributed or delivered to or received by a user from
 #  any person, organization or entity other than ICOT, unless it makes or
 #  grants independently of ICOT any specific warranty to the user in
 #  writing, such person, organization or entity, will also be exempted
 #  from and not be held liable to the user for any such damages as noted
 #  above as far as the program is concerned.
 #
 #  ---------------COPYING.ipadic-----END---------------------------------

3. Lao Word Break Dictionary Data (laodict.txt)

 # Copyright (C) 2016 and later: Unicode, Inc. and others.
 # License & terms of use: http://www.unicode.org/copyright.html
 # Copyright (c) 2015 International Business Machines Corporation
 # and others. All Rights Reserved.
 #
 # Project: https://github.com/rober42539/lao-dictionary
 # Dictionary: https://github.com/rober42539/lao-dictionary/laodict.txt
 # License: https://github.com/rober42539/lao-dictionary/LICENSE.txt
 #          (copied below)
 #
 #  This file is derived from the above dictionary version of Nov 22, 2020
 #  --------------------------------------------------------------------
 #  Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.
 #  All rights reserved.
 #
 #  Redistribution and use in source and binary forms, with or without
 #  modification, are permitted provided that the following conditions are met:
 #
 #  Redistributions of source code must retain the above copyright notice, this
 #  list of conditions and the following disclaimer. Redistributions in binary
 #  form must reproduce the above copyright notice, this list of conditions and
 #  the following disclaimer in the documentation and/or ther materials
 #  provided with the distribution.
 #
 # THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
 # "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
 # LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS
```

```
 # FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
 # COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
 # INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
 # (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
 # SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
 # HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
 # STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
 # ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
 # OF THE POSSIBILITY OF SUCH DAMAGE.
 #  --------------------------------------------------------------------------

4. Burmese Word Break Dictionary Data (burmesedict.txt)

 #  Copyright (c) 2014 International Business Machines Corporation
 #  and others. All Rights Reserved.
 #
 #  This list is part of a project hosted at:
 #    github.com/kanyawtech/myanmar-karen-word-lists
 #
 #  --------------------------------------------------------------------------
 #  Copyright (c) 2013, LeRoy Benjamin Sharon
 #  All rights reserved.
 #
 #  Redistribution and use in source and binary forms, with or without
 #  modification, are permitted provided that the following conditions
 #  are met: Redistributions of source code must retain the above
 #  copyright notice, this list of conditions and the following
 #  disclaimer.  Redistributions in binary form must reproduce the
 #  above copyright notice, this list of conditions and the following
 #  disclaimer in the documentation and/or other materials provided
 #  with the distribution.
 #
 #    Neither the name Myanmar Karen Word Lists, nor the names of its
 #    contributors may be used to endorse or promote products derived
 #    from this software without specific prior written permission.
 #
 #  THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND
 #  CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES,
 #  INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
 #  MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
 #  DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS
 #  BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
 #  EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
 #  TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
 #  DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
 #  ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR
 #  TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF
 #  THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
 #  SUCH DAMAGE.
 #  --------------------------------------------------------------------------
```

```
5. Time Zone Database

  ICU uses the public domain data and code derived from Time Zone
Database for its time zone support. The ownership of the TZ database
is explained in BCP 175: Procedure for Maintaining the Time Zone
Database section 7.

 # 7.  Database Ownership
 #
 #    The TZ database itself is not an IETF Contribution or an IETF
 #    document.  Rather it is a pre-existing and regularly updated work
 #    that is in the public domain, and is intended to remain in the
 #    public domain.  Therefore, BCPs 78 [RFC5378] and 79 [RFC3979] do
 #    not apply to the TZ Database or contributions that individuals make
 #    to it.  Should any claims be made and substantiated against the TZ
 #    Database, the organization that is providing the IANA
 #    Considerations defined in this RFC, under the memorandum of
 #    understanding with the IETF, currently ICANN, may act in accordance
 #    with all competent court orders.  No ownership claims will be made
 #    by ICANN or the IETF Trust on the database or the code.  Any person
 #    making a contribution to the database or code waives all rights to
 #    future claims in that contribution or in the TZ Database.

6. Google double-conversion

Copyright 2006-2011, the V8 project authors. All rights reserved.
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
      notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
      copyright notice, this list of conditions and the following
      disclaimer in the documentation and/or other materials provided
      with the distribution.
    * Neither the name of Google Inc. nor the names of its
      contributors may be used to endorse or promote products derived
      from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

```
=====================================================

Unicode® Copyright and Terms of Use
For the general privacy policy governing access to this site, see the  Unicode Privacy
Policy.

Unicode Copyright
Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Definitions
Unicode Data Files ("DATA FILES") include all data files under the directories:
https://www.unicode.org/Public/
https://www.unicode.org/reports/
https://www.unicode.org/ivd/data/

Unicode Data Files do not include PDF online code charts under the directory:
https://www.unicode.org/Public/

Unicode Software ("SOFTWARE") includes any source code published in the Unicode
Standard
or any source code or compiled code under the directories:
https://www.unicode.org/Public/PROGRAMS/
https://www.unicode.org/Public/cldr/
http://site.icu-project.org/download/
Terms of Use
Certain documents and files on this website contain a legend indicating that
"Modification is permitted." Any person is hereby authorized, without fee, to modify
such documents and files to create derivative works conforming to the Unicode®
Standard, subject to Terms and Conditions herein.
Any person is hereby authorized, without fee, to view, use, reproduce, and distribute
all documents and files, subject to the Terms and Conditions herein.
Further specifications of rights and restrictions pertaining to the use of the Unicode
DATA FILES and SOFTWARE can be found in the Unicode Data Files and Software License.
Each version of the Unicode Standard has further specifications of rights and
restrictions of use. For the book editions (Unicode 5.0 and earlier), these are found
on the back of the title page.
The Unicode PDF online code charts carry specific restrictions. Those restrictions are
incorporated as the first page of each PDF code chart.
All other files, including online documentation of the core specification for Unicode
6.0 and later, are covered under these general Terms of Use.
No license is granted to "mirror" the Unicode website where a fee is charged for
access to the "mirror" site.
Modification is not permitted with respect to this document. All copies of this
document must be verbatim.
Restricted Rights Legend
Any technical data or software which is licensed to the United States of America, its
agencies and/or instrumentalities under this Agreement is commercial technical data or
commercial computer software developed exclusively at private expense as defined in
FAR 2.101, or DFARS 252.227-7014 (June 1995), as applicable. For technical data, use,
duplication, or disclosure by the Government is subject to restrictions as set forth
in DFARS 202.227-7015 Technical Data, Commercial and Items (Nov 1995) and this
```

Agreement. For Software, in accordance with FAR 12-212 or DFARS 227-7202, as applicable, use, duplication or disclosure by the Government is subject to the restrictions set forth in this Agreement.

Warranties and Disclaimers

This publication and/or website may include technical or typographical errors or other inaccuracies. Changes are periodically added to the information herein; these changes will be incorporated in new editions of the publication and/or website. Unicode, Inc. may make improvements and/or changes in the product(s) and/or program(s) described in this publication and/or website at any time.

If this file has been purchased on magnetic or optical media from Unicode, Inc. the sole and exclusive remedy for any claim will be exchange of the defective media within ninety (90) days of original purchase.

EXCEPT AS PROVIDED IN SECTION E.2, THIS PUBLICATION AND/OR SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND EITHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. UNICODE, INC. AND ITS LICENSORS ASSUME NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THIS PUBLICATION AND/OR SOFTWARE OR OTHER DOCUMENTS WHICH ARE REFERENCED BY OR LINKED TO THIS PUBLICATION OR THE UNICODE WEBSITE.

Waiver of Damages

In no event shall Unicode, Inc. or its licensors be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever, whether or not Unicode, Inc. was advised of the possibility of the damage, including, without limitation, those resulting from the following: loss of use, data or profits, in connection with the use, modification or distribution of this information or its derivatives.

Trademarks & Logos

The Unicode Word Mark and the Unicode Logo are trademarks of Unicode, Inc. “The Unicode Consortium” and “Unicode, Inc.” are trade names of Unicode, Inc. Use of the information and materials found on this website indicates your acknowledgement of Unicode, Inc.’s exclusive worldwide rights in the Unicode Word Mark, the Unicode Logo, and the Unicode trade names.

The Unicode Consortium Name and Trademark Usage Policy (“Trademark Policy”) are incorporated herein by reference and you agree to abide by the provisions of the Trademark Policy, which may be changed from time to time in the sole discretion of Unicode, Inc.

All third party trademarks referenced herein are the property of their respective owners.

Miscellaneous

Jurisdiction and Venue. This website is operated from a location in the State of California, United States of America. Unicode, Inc. makes no representation that the materials are appropriate for use in other locations. If you access this website from other locations, you are responsible for compliance with local laws. This Agreement, all use of this website and any claims and damages resulting from use of this website are governed solely by the laws of the State of California without regard to any principles which would apply the laws of a different jurisdiction. The user agrees that any disputes regarding this website shall be resolved solely in the courts located in Santa Clara County, California. The user agrees said courts have personal jurisdiction and agree to waive any right to transfer the dispute to any other forum.

Modification by Unicode, Inc. Unicode, Inc. shall have the right to modify this Agreement at any time by posting it to this website. The user may not assign any part of this Agreement without Unicode, Inc.’s prior written consent.

```
Taxes. The user agrees to pay any taxes arising from access to this website or use of
the information herein, except for those based on Unicode□s net income.
Severability.  If any provision of this Agreement is declared invalid or
unenforceable, the remaining provisions of this Agreement shall remain in effect.
Entire Agreement. This Agreement constitutes the entire agreement between the parties.

=====================================================

UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use
for definitions of Unicode Inc.□s Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.
BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in https://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
```

```
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.
```

## Libffi v3.4.6

### Libffi General License

```
libffi - Copyright (c) 1996-2024  Anthony Green, Red Hat, Inc and others.
See source files for details.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
``Software''), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED ``AS IS'', WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
```

## Mozilla Public Suffix List

### Public Suffix Notice

```
You are receiving a copy of the Mozilla Public Suffix List in the following
file: <java-home>/lib/security/public_suffix_list.dat. The terms of the
Oracle license do NOT apply to this file; it is licensed under the
Mozilla Public License 2.0, separately from the Oracle programs you receive.
If you do not wish to use the Public Suffix List, you may remove the
<java-home>/lib/security/public_suffix_list.dat file.

The Source Code of this file is available under the
Mozilla Public License, v. 2.0 and is located at
https://raw.githubusercontent.com/publicsuffix/list/1cbd6e71a9b83620b1d0b11e49d3d9ff48
c27e22/public_suffix_list.dat.
```

```
If a copy of the MPL was not distributed with this file, you can obtain one
at https://mozilla.org/MPL/2.0/.

Software distributed under the License is distributed on an "AS IS" basis,
WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License
for the specific language governing rights and limitations under the License.
```

**MPL v2.0**

```
Mozilla Public License Version 2.0
==================================

1. Definitions
--------------

1.1. "Contributor"
    means each individual or legal entity that creates, contributes to
    the creation of, or owns Covered Software.

1.2. "Contributor Version"
    means the combination of the Contributions of others (if any) used
    by a Contributor and that particular Contributor's Contribution.

1.3. "Contribution"
    means Covered Software of a particular Contributor.

1.4. "Covered Software"
    means Source Code Form to which the initial Contributor has attached
    the notice in Exhibit A, the Executable Form of such Source Code
    Form, and Modifications of such Source Code Form, in each case
    including portions thereof.

1.5. "Incompatible With Secondary Licenses"
    means

    (a) that the initial Contributor has attached the notice described
        in Exhibit B to the Covered Software; or

    (b) that the Covered Software was made available under the terms of
        version 1.1 or earlier of the License, but not also under the
        terms of a Secondary License.

1.6. "Executable Form"
    means any form of the work other than Source Code Form.

1.7. "Larger Work"
    means a work that combines Covered Software with other material, in
    a separate file or files, that is not Covered Software.

1.8. "License"
```

```
    means this document.

1.9. "Licensable"
    means having the right to grant, to the maximum extent possible,
    whether at the time of the initial grant or subsequently, any and
    all of the rights conveyed by this License.

1.10. "Modifications"
    means any of the following:

    (a) any file in Source Code Form that results from an addition to,
        deletion from, or modification of the contents of Covered
        Software; or

    (b) any new file in Source Code Form that contains any Covered
        Software.

1.11. "Patent Claims" of a Contributor
    means any patent claim(s), including without limitation, method,
    process, and apparatus claims, in any patent Licensable by such
    Contributor that would be infringed, but for the grant of the
    License, by the making, using, selling, offering for sale, having
    made, import, or transfer of either its Contributions or its
    Contributor Version.

1.12. "Secondary License"
    means either the GNU General Public License, Version 2.0, the GNU
    Lesser General Public License, Version 2.1, the GNU Affero General
    Public License, Version 3.0, or any later versions of those
    licenses.

1.13. "Source Code Form"
    means the form of the work preferred for making modifications.

1.14. "You" (or "Your")
    means an individual or a legal entity exercising rights under this
    License. For legal entities, "You" includes any entity that
    controls, is controlled by, or is under common control with You. For
    purposes of this definition, "control" means (a) the power, direct
    or indirect, to cause the direction or management of such entity,
    whether by contract or otherwise, or (b) ownership of more than
    fifty percent (50%) of the outstanding shares or beneficial
    ownership of such entity.

2. License Grants and Conditions
--------------------------------

2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free,
non-exclusive license:
```

(a) under intellectual property rights (other than patent or trademark)
    Licensable by such Contributor to use, reproduce, make available,
    modify, display, perform, distribute, and otherwise exploit its
    Contributions, either on an unmodified basis, with Modifications, or
    as part of a Larger Work; and

(b) under Patent Claims of such Contributor to make, use, sell, offer
    for sale, have made, import, and otherwise transfer either its
    Contributions or its Contributor Version.

2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution
become effective for each Contribution on the date the Contributor first
distributes such Contribution.

2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under
this License. No additional rights or licenses will be implied from the
distribution or licensing of Covered Software under this License.
Notwithstanding Section 2.1(b) above, no patent license is granted by a
Contributor:

(a) for any code that a Contributor has removed from Covered Software;
    or

(b) for infringements caused by: (i) Your and any other third party's
    modifications of Covered Software, or (ii) the combination of its
    Contributions with other software (except as part of its Contributor
    Version); or

(c) under Patent Claims infringed by Covered Software in the absence of
    its Contributions.

This License does not grant any rights in the trademarks, service marks,
or logos of any Contributor (except as may be necessary to comply with
the notice requirements in Section 3.4).

2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to
distribute the Covered Software under a subsequent version of this
License (see Section 10.2) or under the terms of a Secondary License (if
permitted under the terms of Section 3.3).

2.5. Representation

Each Contributor represents that the Contributor believes its
Contributions are its original creation(s) or it has sufficient rights

```
to grant the rights to its Contributions conveyed by this License.

2.6. Fair Use

This License is not intended to limit any rights You have under
applicable copyright doctrines of fair use, fair dealing, or other
equivalents.

2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted
in Section 2.1.

3. Responsibilities
-------------------

3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any
Modifications that You create or to which You contribute, must be under
the terms of this License. You must inform recipients that the Source
Code Form of the Covered Software is governed by the terms of this
License, and how they can obtain a copy of this License. You may not
attempt to alter or restrict the recipients' rights in the Source Code
Form.

3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

(a) such Covered Software must also be made available in Source Code
    Form, as described in Section 3.1, and You must inform recipients of
    the Executable Form how they can obtain a copy of such Source Code
    Form by reasonable means in a timely manner, at a charge no more
    than the cost of distribution to the recipient; and

(b) You may distribute such Executable Form under the terms of this
    License, or sublicense it under different terms, provided that the
    license for the Executable Form does not attempt to limit or alter
    the recipients' rights in the Source Code Form under this License.

3.3. Distribution of a Larger Work

You may create and distribute a Larger Work under terms of Your choice,
provided that You also comply with the requirements of this License for
the Covered Software. If the Larger Work is a combination of Covered
Software with a work governed by one or more Secondary Licenses, and the
Covered Software is not Incompatible With Secondary Licenses, this
License permits You to additionally distribute such Covered Software
under the terms of such Secondary License(s), so that the recipient of
the Larger Work may, at their option, further distribute the Covered
```

```
Software under the terms of either this License or such Secondary
License(s).

3.4. Notices

You may not remove or alter the substance of any license notices
(including copyright notices, patent notices, disclaimers of warranty,
or limitations of liability) contained within the Source Code Form of
the Covered Software, except that You may alter any license notices to
the extent required to remedy known factual inaccuracies.

3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support,
indemnity or liability obligations to one or more recipients of Covered
Software. However, You may do so only on Your own behalf, and not on
behalf of any Contributor. You must make it absolutely clear that any
such warranty, support, indemnity, or liability obligation is offered by
You alone, and You hereby agree to indemnify every Contributor for any
liability incurred by such Contributor as a result of warranty, support,
indemnity or liability terms You offer. You may include additional
disclaimers of warranty and limitations of liability specific to any
jurisdiction.

4. Inability to Comply Due to Statute or Regulation
---------------------------------------------------

If it is impossible for You to comply with any of the terms of this
License with respect to some or all of the Covered Software due to
statute, judicial order, or regulation then You must: (a) comply with
the terms of this License to the maximum extent possible; and (b)
describe the limitations and the code they affect. Such description must
be placed in a text file included with all distributions of the Covered
Software under this License. Except to the extent prohibited by statute
or regulation, such description must be sufficiently detailed for a
recipient of ordinary skill to be able to understand it.

5. Termination
--------------

5.1. The rights granted under this License will terminate automatically
if You fail to comply with any of its terms. However, if You become
compliant, then the rights granted under this License from a particular
Contributor are reinstated (a) provisionally, unless and until such
Contributor explicitly and finally terminates Your grants, and (b) on an
ongoing basis, if such Contributor fails to notify You of the
non-compliance by some reasonable means prior to 60 days after You have
come back into compliance. Moreover, Your grants from a particular
Contributor are reinstated on an ongoing basis if such Contributor
notifies You of the non-compliance by some reasonable means, this is the
first time You have received notice of non-compliance with this License
```

```
from such Contributor, and You become compliant prior to 30 days after
Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent
infringement claim (excluding declaratory judgment actions,
counter-claims, and cross-claims) alleging that a Contributor Version
directly or indirectly infringes any patent, then the rights granted to
You by any and all Contributors for the Covered Software under Section
2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all
end user license agreements (excluding distributors and resellers) which
have been validly granted by You or Your distributors under this License
prior to termination shall survive termination.

************************************************************************
*                                                                      *
*  6. Disclaimer of Warranty                                           *
*  -------------------------                                           *
*                                                                      *
*  Covered Software is provided under this License on an "as is"       *
*  basis, without warranty of any kind, either expressed, implied, or  *
*  statutory, including, without limitation, warranties that the       *
*  Covered Software is free of defects, merchantable, fit for a        *
*  particular purpose or non-infringing. The entire risk as to the     *
*  quality and performance of the Covered Software is with You.        *
*  Should any Covered Software prove defective in any respect, You     *
*  (not any Contributor) assume the cost of any necessary servicing,   *
*  repair, or correction. This disclaimer of warranty constitutes an   *
*  essential part of this License. No use of any Covered Software is   *
*  authorized under this License except under this disclaimer.         *
*                                                                      *
************************************************************************

************************************************************************
*                                                                      *
*  7. Limitation of Liability                                          *
*  --------------------------                                          *
*                                                                      *
*  Under no circumstances and under no legal theory, whether tort      *
*  (including negligence), contract, or otherwise, shall any           *
*  Contributor, or anyone who distributes Covered Software as          *
*  permitted above, be liable to You for any direct, indirect,         *
*  special, incidental, or consequential damages of any character      *
*  including, without limitation, damages for lost profits, loss of    *
*  goodwill, work stoppage, computer failure or malfunction, or any    *
*  and all other commercial damages or losses, even if such party      *
*  shall have been informed of the possibility of such damages. This   *
*  limitation of liability shall not apply to liability for death or   *
*  personal injury resulting from such party's negligence to the       *
*  extent applicable law prohibits such limitation. Some               *
```

```
*  jurisdictions do not allow the exclusion or limitation of          *
*  incidental or consequential damages, so this exclusion and         *
*  limitation may not apply to You.                                   *
*                                                                     *
***********************************************************************

8. Litigation
-------------

Any litigation relating to this License may be brought only in the
courts of a jurisdiction where the defendant maintains its principal
place of business and such litigation shall be governed by laws of that
jurisdiction, without reference to its conflict-of-law provisions.
Nothing in this Section shall prevent a party's ability to bring
cross-claims or counter-claims.

9. Miscellaneous
----------------

This License represents the complete agreement concerning the subject
matter hereof. If any provision of this License is held to be
unenforceable, such provision shall be reformed only to the extent
necessary to make it enforceable. Any law or regulation which provides
that the language of a contract shall be construed against the drafter
shall not be used to construe this License against a Contributor.

10. Versions of the License
---------------------------

10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section
10.3, no one other than the license steward has the right to modify or
publish new versions of this License. Each version will be given a
distinguishing version number.

10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version
of the License under which You originally received the Covered Software,
or under the terms of any subsequent version published by the license
steward.

10.3. Modified Versions

If you create software not governed by this License, and you want to
create a new license for such software, you may create and use a
modified version of this License if you rename the license and remove
any references to the name of the license steward (except to note that
such modified license differs from this License).
```

```
10.4. Distributing Source Code Form that is Incompatible With Secondary
Licenses

If You choose to distribute Source Code Form that is Incompatible With
Secondary Licenses under the terms of this version of the License, the
notice described in Exhibit B of this License must be attached.

Exhibit A - Source Code Form License Notice
-------------------------------------------

  This Source Code Form is subject to the terms of the Mozilla Public
  License, v. 2.0. If a copy of the MPL was not distributed with this
  file, You can obtain one at https://mozilla.org/MPL/2.0/.

If it is not possible or desirable to put the notice in a particular
file, then You may include the notice in a location (such as a LICENSE
file in a relevant directory) where a recipient would be likely to look
for such a notice.

You may add additional accurate notices of copyright ownership.

Exhibit B - "Incompatible With Secondary Licenses" Notice
---------------------------------------------------------

  This Source Code Form is "Incompatible With Secondary Licenses", as
  defined by the Mozilla Public License, v. 2.0.
```

## SipHash v1.0-68c8a7c

### Notice

SipHash reference C implementation

```
   Copyright (c) 2016 Jean-Philippe Aumasson <jeanphilippe.aumasson@gmail.com>

   To the extent possible under law, the author(s) have dedicated all copyright
   and related and neighboring rights to this software to the public domain
   worldwide. This software is distributed without any warranty.

   You should have received a copy of the CC0 Public Domain Dedication along
   with
   this software. If not, see
   <http://creativecommons.org/publicdomain/zero/1.0/>.
```

### Licenses

The code is dual-licensed CCO and MIT

**MIT License**

```
Copyright 2012-2024 JP Aumasson

Permission is hereby granted, free of charge, to any person obtaining a copy of this
software and associated documentation files (the "Software"), to deal in the Software
without restriction, including without limitation the rights to use, copy, modify,
merge, publish, distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to the following
conditions:

The above copyright notice and this permission notice shall be included in all copies
or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED,
INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A
PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT
HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF
CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE
OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
```

**CC0 1.0 Universal**

```
Statement of Purpose

The laws of most jurisdictions throughout the world automatically confer
exclusive Copyright and Related Rights (defined below) upon the creator and
subsequent owner(s) (each and all, an "owner") of an original work of
authorship and/or a database (each, a "Work").

Certain owners wish to permanently relinquish those rights to a Work for the
purpose of contributing to a commons of creative, cultural and scientific
works ("Commons") that the public can reliably and without fear of later
claims of infringement build upon, modify, incorporate in other works, reuse
and redistribute as freely as possible in any form whatsoever and for any
purposes, including without limitation commercial purposes. These owners may
contribute to the Commons to promote the ideal of a free culture and the
further production of creative, cultural and scientific works, or to gain
reputation or greater distribution for their Work in part through the use and
efforts of others.

For these and/or other purposes and motivations, and without any expectation
of additional consideration or compensation, the person associating CC0 with a
Work (the "Affirmer"), to the extent that he or she is an owner of Copyright
and Related Rights in the Work, voluntarily elects to apply CC0 to the Work
and publicly distribute the Work under its terms, with knowledge of his or her
Copyright and Related Rights in the Work and the meaning and intended legal
effect of CC0 on those rights.
```

```
1. Copyright and Related Rights. A Work made available under CC0 may be
protected by copyright and related or neighboring rights ("Copyright and
Related Rights"). Copyright and Related Rights include, but are not limited
to, the following:

  i. the right to reproduce, adapt, distribute, perform, display, communicate,
  and translate a Work;

  ii. moral rights retained by the original author(s) and/or performer(s);

  iii. publicity and privacy rights pertaining to a person's image or likeness
  depicted in a Work;

  iv. rights protecting against unfair competition in regards to a Work,
  subject to the limitations in paragraph 4(a), below;

  v. rights protecting the extraction, dissemination, use and reuse of data in
  a Work;

  vi. database rights (such as those arising under Directive 96/9/EC of the
  European Parliament and of the Council of 11 March 1996 on the legal
  protection of databases, and under any national implementation thereof,
  including any amended or successor version of such directive); and

  vii. other similar, equivalent or corresponding rights throughout the world
  based on applicable law or treaty, and any national implementations thereof.

2. Waiver. To the greatest extent permitted by, but not in contravention of,
applicable law, Affirmer hereby overtly, fully, permanently, irrevocably and
unconditionally waives, abandons, and surrenders all of Affirmer's Copyright
and Related Rights and associated claims and causes of action, whether now
known or unknown (including existing as well as future claims and causes of
action), in the Work (i) in all territories worldwide, (ii) for the maximum
duration provided by applicable law or treaty (including future time
extensions), (iii) in any current or future medium and for any number of
copies, and (iv) for any purpose whatsoever, including without limitation
commercial, advertising or promotional purposes (the "Waiver"). Affirmer makes
the Waiver for the benefit of each member of the public at large and to the
detriment of Affirmer's heirs and successors, fully intending that such Waiver
shall not be subject to revocation, rescission, cancellation, termination, or
any other legal or equitable action to disrupt the quiet enjoyment of the Work
by the public as contemplated by Affirmer's express Statement of Purpose.

3. Public License Fallback. Should any part of the Waiver for any reason be
judged legally invalid or ineffective under applicable law, then the Waiver
shall be preserved to the maximum extent permitted taking into account
Affirmer's express Statement of Purpose. In addition, to the extent the Waiver
is so judged Affirmer hereby grants to each affected person a royalty-free,
non transferable, non sublicensable, non exclusive, irrevocable and
unconditional license to exercise Affirmer's Copyright and Related Rights in
the Work (i) in all territories worldwide, (ii) for the maximum duration
```

```
provided by applicable law or treaty (including future time extensions), (iii)
in any current or future medium and for any number of copies, and (iv) for any
purpose whatsoever, including without limitation commercial, advertising or
promotional purposes (the "License"). The License shall be deemed effective as
of the date CC0 was applied by Affirmer to the Work. Should any part of the
License for any reason be judged legally invalid or ineffective under
applicable law, such partial invalidity or ineffectiveness shall not
invalidate the remainder of the License, and in such case Affirmer hereby
affirms that he or she will not (i) exercise any of his or her remaining
Copyright and Related Rights in the Work or (ii) assert any associated claims
and causes of action with respect to the Work, in either case contrary to
Affirmer's express Statement of Purpose.

4. Limitations and Disclaimers.

  a. No trademark or patent rights held by Affirmer are waived, abandoned,
  surrendered, licensed or otherwise affected by this document.

  b. Affirmer offers the Work as-is and makes no representations or warranties
  of any kind concerning the Work, express, implied, statutory or otherwise,
  including without limitation warranties of title, merchantability, fitness
  for a particular purpose, non infringement, or the absence of latent or
  other defects, accuracy, or the present or absence of errors, whether or not
  discoverable, all to the greatest extent permissible under applicable law.

  c. Affirmer disclaims responsibility for clearing rights of other persons
  that may apply to the Work or any use thereof, including without limitation
  any person's Copyright and Related Rights in the Work. Further, Affirmer
  disclaims responsibility for obtaining any necessary consents, permissions
  or other rights required for any use of the Work.

  d. Affirmer understands and acknowledges that Creative Commons is not a
  party to this document and has no duty or obligation with respect to this
  CC0 or use of the Work.

For more information, please see
<http://creativecommons.org/publicdomain/zero/1.0/>
```

## The Unicode Standard, Unicode Character Database, Version 15.0.0

### Unicode Character Database

```
UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use for definitions of Unicode Inc.'s
Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.
```

```
BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in https://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.

=== http://www.unicode.org/copyright.html content ===
Unicode (R) Copyright and Terms of Use
For the general privacy policy governing access to this site, see the  Unicode Privacy
Policy.

Unicode Copyright
Copyright (C) 1991-2022 Unicode, Inc. All rights reserved.
Definitions
Unicode Data Files ("DATA FILES") include all data files under the directories:
https://www.unicode.org/Public/
```

```
https://www.unicode.org/reports/
https://www.unicode.org/ivd/data/

Unicode Data Files do not include PDF online code charts under the directory:
https://www.unicode.org/Public/

Unicode Software ("SOFTWARE") includes any source code published in the Unicode
Standard
or any source code or compiled code under the directories:
https://www.unicode.org/Public/PROGRAMS/
https://www.unicode.org/Public/cldr/
http://site.icu-project.org/download/
Terms of Use
Certain documents and files on this website contain a legend indicating that
"Modification is permitted." Any person is hereby authorized, without fee, to modify
such documents and files to create derivative works conforming to the Unicode®
Standard, subject to Terms and Conditions herein.
Any person is hereby authorized, without fee, to view, use, reproduce, and distribute
all documents and files, subject to the Terms and Conditions herein.
Further specifications of rights and restrictions pertaining to the use of the Unicode
DATA FILES and SOFTWARE can be found in the Unicode Data Files and Software License.
Each version of the Unicode Standard has further specifications of rights and
restrictions of use. For the book editions (Unicode 5.0 and earlier), these are found
on the back of the title page.
The Unicode PDF online code charts carry specific restrictions. Those restrictions are
incorporated as the first page of each PDF code chart.
All other files, including online documentation of the core specification for Unicode
6.0 and later, are covered under these general Terms of Use.
No license is granted to "mirror" the Unicode website where a fee is charged for
access to the "mirror" site.
Modification is not permitted with respect to this document. All copies of this
document must be verbatim.
Restricted Rights Legend
Any technical data or software which is licensed to the United States of America, its
agencies and/or instrumentalities under this Agreement is commercial technical data or
commercial computer software developed exclusively at private expense as defined in
FAR 2.101, or DFARS 252.227-7014 (June 1995), as applicable. For technical data, use,
duplication, or disclosure by the Government is subject to restrictions as set forth
in DFARS 202.227-7015 Technical Data, Commercial and Items (Nov 1995) and this
Agreement. For Software, in accordance with FAR 12-212 or DFARS 227-7202, as
applicable, use, duplication or disclosure by the Government is subject to the
restrictions set forth in this Agreement.
Warranties and Disclaimers
This publication and/or website may include technical or typographical errors or other
inaccuracies. Changes are periodically added to the information herein; these changes
will be incorporated in new editions of the publication and/or website. Unicode, Inc.
may make improvements and/or changes in the product(s) and/or program(s) described in
this publication and/or website at any time.
If this file has been purchased on magnetic or optical media from Unicode, Inc. the
sole and exclusive remedy for any claim will be exchange of the defective media within
ninety (90) days of original purchase.
```

```
EXCEPT AS PROVIDED IN SECTION E.2, THIS PUBLICATION AND/OR SOFTWARE IS PROVIDED "AS
IS" WITHOUT WARRANTY OF ANY KIND EITHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT
NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE,
OR NON-INFRINGEMENT. UNICODE, INC. AND ITS LICENSORS ASSUME NO RESPONSIBILITY FOR
ERRORS OR OMISSIONS IN THIS PUBLICATION AND/OR SOFTWARE OR OTHER DOCUMENTS WHICH ARE
REFERENCED BY OR LINKED TO THIS PUBLICATION OR THE UNICODE WEBSITE.
Waiver of Damages
In no event shall Unicode, Inc. or its licensors be liable for any special,
incidental, indirect or consequential damages of any kind, or any damages whatsoever,
whether or not Unicode, Inc. was advised of the possibility of the damage, including,
without limitation, those resulting from the following: loss of use, data or profits,
in connection with the use, modification or distribution of this information or its
derivatives.
Trademarks & Logos
The Unicode Word Mark and the Unicode Logo are trademarks of Unicode, Inc. "The
Unicode Consortium" and "Unicode, Inc." are trade names of Unicode, Inc. Use of the
information and materials found on this website indicates your acknowledgement of
Unicode, Inc.'s exclusive worldwide rights in the Unicode Word Mark, the Unicode Logo,
and the Unicode trade names.
The Unicode Consortium Name and Trademark Usage Policy ("Trademark Policy") are
incorporated herein by reference and you agree to abide by the provisions of the
Trademark Policy, which may be changed from time to time in the sole discretion of
Unicode, Inc.
All third party trademarks referenced herein are the property of their respective
owners.
Miscellaneous
Jurisdiction and Venue. This website is operated from a location in the State of
California, United States of America. Unicode, Inc. makes no representation that the
materials are appropriate for use in other locations. If you access this website from
other locations, you are responsible for compliance with local laws. This Agreement,
all use of this website and any claims and damages resulting from use of this website
are governed solely by the laws of the State of California without regard to any
principles which would apply the laws of a different jurisdiction. The user agrees
that any disputes regarding this website shall be resolved solely in the courts
located in Santa Clara County, California. The user agrees said courts have personal
jurisdiction and agree to waive any right to transfer the dispute to any other forum.
Modification by Unicode, Inc. Unicode, Inc. shall have the right to modify this
Agreement at any time by posting it to this website. The user may not assign any part
of this Agreement without Unicode, Inc.'s prior written consent.
Taxes. The user agrees to pay any taxes arising from access to this website or use of
the information herein, except for those based on Unicode's net income.
Severability.  If any provision of this Agreement is declared invalid or
unenforceable, the remaining provisions of this Agreement shall remain in effect.
Entire Agreement. This Agreement constitutes the entire agreement between the parties.
```

## Unicode Common Local Data Repository (CLDR) v43

**CLDR License**

```
UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use <https://www.unicode.org/copyright.html>
for definitions of Unicode Inc.s Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.
BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in https://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.
```

```
--------------------------------------------------------- Terms of Use
---------------------------------------------------------------


    Unicode® Copyright and Terms of Use

    For the general privacy policy governing access to this site, see the  Unicode
Privacy Policy.

        Unicode Copyright
            Copyright © 1991-2023 Unicode, Inc. All rights reserved.
        Definitions

        Unicode Data Files ("DATA FILES") include all data files under the
directories:
        https://www.unicode.org/Public/
        https://www.unicode.org/reports/
        https://www.unicode.org/ivd/data/

        Unicode Data Files do not include PDF online code charts under the directory:
        https://www.unicode.org/Public/

        Unicode Software ("SOFTWARE") includes any source code published in the
Unicode Standard
        or any source code or compiled code under the directories:
        https://www.unicode.org/Public/PROGRAMS/
        https://www.unicode.org/Public/cldr/
        http://site.icu-project.org/download/

        Terms of Use
            Certain documents and files on this website contain a legend indicating
that "Modification is permitted." Any person is hereby authorized, without fee, to
modify such documents and files to create derivative works conforming to the Unicode®
Standard, subject to Terms and Conditions herein.
            Any person is hereby authorized, without fee, to view, use, reproduce, and
distribute all documents and files, subject to the Terms and Conditions herein.
            Further specifications of rights and restrictions pertaining to the use of
the Unicode DATA FILES and SOFTWARE can be found in the Unicode Data Files and
Software License.
            Each version of the Unicode Standard has further specifications of rights
and restrictions of use. For the book editions (Unicode 5.0 and earlier), these are
found on the back of the title page.
            The Unicode PDF online code charts carry specific restrictions. Those
restrictions are incorporated as the first page of each PDF code chart.
            All other files, including online documentation of the core specification
for Unicode 6.0 and later, are covered under these general Terms of Use.
            No license is granted to "mirror" the Unicode website where a fee is
charged for access to the "mirror" site.
            Modification is not permitted with respect to this document. All copies of
this document must be verbatim.
        Restricted Rights Legend
```

Any technical data or software which is licensed to the United States of America, its agencies and/or instrumentalities under this Agreement is commercial technical data or commercial computer software developed exclusively at private expense as defined in FAR 2.101, or DFARS 252.227-7014 (June 1995), as applicable. For technical data, use, duplication, or disclosure by the Government is subject to restrictions as set forth in DFARS 202.227-7015 Technical Data, Commercial and Items (Nov 1995) and this Agreement. For Software, in accordance with FAR 12-212 or DFARS 227-7202, as applicable, use, duplication or disclosure by the Government is subject to the restrictions set forth in this Agreement.

Warranties and Disclaimers

This publication and/or website may include technical or typographical errors or other inaccuracies. Changes are periodically added to the information herein; these changes will be incorporated in new editions of the publication and/or website. Unicode, Inc. may make improvements and/or changes in the product(s) and/or program(s) described in this publication and/or website at any time.

If this file has been purchased on magnetic or optical media from Unicode, Inc. the sole and exclusive remedy for any claim will be exchange of the defective media within ninety (90) days of original purchase.

EXCEPT AS PROVIDED IN SECTION E.2, THIS PUBLICATION AND/OR SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND EITHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. UNICODE, INC. AND ITS LICENSORS ASSUME NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THIS PUBLICATION AND/OR SOFTWARE OR OTHER DOCUMENTS WHICH ARE REFERENCED BY OR LINKED TO THIS PUBLICATION OR THE UNICODE WEBSITE.

Waiver of Damages

In no event shall Unicode, Inc. or its licensors be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever, whether or not Unicode, Inc. was advised of the possibility of the damage, including, without limitation, those resulting from the following: loss of use, data or profits, in connection with the use, modification or distribution of this information or its derivatives.

Trademarks & Logos

The Unicode Word Mark and the Unicode Logo are trademarks of Unicode, Inc. “The Unicode Consortium” and “Unicode, Inc.” are trade names of Unicode, Inc. Use of the information and materials found on this website indicates your acknowledgement of Unicode, Inc.’s exclusive worldwide rights in the Unicode Word Mark, the Unicode Logo, and the Unicode trade names.

The Unicode Consortium Name and Trademark Usage Policy (“Trademark Policy”) are incorporated herein by reference and you agree to abide by the provisions of the Trademark Policy, which may be changed from time to time in the sole discretion of Unicode, Inc.

All third party trademarks referenced herein are the property of their respective owners.

Miscellaneous

Jurisdiction and Venue. This website is operated from a location in the State of California, United States of America. Unicode, Inc. makes no representation that the materials are appropriate for use in other locations. If you access this website from other locations, you are responsible for compliance with local laws. This Agreement, all use of this website and any claims and damages resulting from use of this website are governed solely by the laws of the State of California without regard

```
to any principles which would apply the laws of a different jurisdiction. The user
agrees that any disputes regarding this website shall be resolved solely in the courts
located in Santa Clara County, California. The user agrees said courts have personal
jurisdiction and agree to waive any right to transfer the dispute to any other forum.
            Modification by Unicode, Inc. Unicode, Inc. shall have the right to modify
this Agreement at any time by posting it to this website. The user may not assign any
part of this Agreement without Unicode, Inc.□s prior written consent.
            Taxes. The user agrees to pay any taxes arising from access to this
website or use of the information herein, except for those based on Unicode□s net
income.
            Severability.  If any provision of this Agreement is declared invalid or
unenforceable, the remaining provisions of this Agreement shall remain in effect.
            Entire Agreement. This Agreement constitutes the entire agreement between
the parties.
```

## Warp 2.7.1

**BSD-2-Clause**

Copyright 2017-2024 Azul Systems, Inc.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

## c-libutl 20160225

#### c-libutl License

```
This software is distributed under the terms of the BSD license.

==  BSD LICENSE  ============================================================

 (C) 2009 by Remo Dentato (rdentato@gmail.com)


Redistribution and use in source and binary forms, with or without modification,
are permitted provided that the following conditions are met:

    * Redistributions of source code must retain the above copyright notice,
      this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above copyright notice,
      this list of conditions and the following disclaimer in the documentation
      and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

http://opensource.org/licenses/bsd-license.php
```

---

## libnet v1.1.6

#### libnet License

```
    $Id: COPYING,v 1.1.1.1 2003/06/26 21:55:10 route Exp $

    libnet 1.1.x
    Copyright (c) 1998 - 2002 Mike D. Schiffman <mike@infonexus.com>
                              http://www.packetfactory.net/libnet
    LIBNET 1.1.3+ (c) 2009 - 2012 Sam Roberts <vieuxtech@gmail.com>

All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:
```

```
1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED.  IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
SUCH DAMAGE.


EOF
```

## libnl v3.2.25

### libnl License

```
                  GNU LESSER GENERAL PUBLIC LICENSE
                       Version 2.1, February 1999

 Copyright (C) 1991, 1999 Free Software Foundation, Inc.
 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

  This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it.  You
```

```
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

  When we speak of free software, we are referring to freedom of use,
not price.  Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

  To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights.  These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

  For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you.  You must make sure that they, too, receive or can get the source
code.  If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it.  And you must show them these terms so they know their rights.

  We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

  To protect each distributor, we want to make it very clear that
there is no warranty for the free library.  Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

  Finally, software patents pose a constant threat to the existence of
any free program.  We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder.  Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

  Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License.  This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License.  We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

  When a program is linked with a library, whether statically or using
```

```
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library.  The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom.  The Lesser General
Public License permits more lax criteria for linking other code with
the library.

  We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License.  It also provides other free software developers Less
of an advantage over competing non-free programs.  These disadvantages
are the reason we use the ordinary General Public License for many
libraries.  However, the Lesser license provides advantages in certain
special circumstances.

  For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard.  To achieve this, non-free programs must be
allowed to use the library.  A more frequent case is that a free
library does the same job as widely used non-free libraries.  In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.

  In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software.  For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

  The precise terms and conditions for copying, distribution and
modification follow.  Pay close attention to the difference between a
"work based on the library" and a "work that uses the library".  The
former contains code derived from the library, whereas the latter must
be combined with the library in order to run.

                  GNU LESSER GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

  A "library" means a collection of software functions and/or data
```

```
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

  The "Library", below, refers to any such software library or work
which has been distributed under these terms.  A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language.  (Hereinafter, translation is
included without limitation in the term "modification".)

  "Source code" for a work means the preferred form of the work for
making modifications to it.  For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

  Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it).  Whether that is true depends on what the Library does
and what the program that uses the Library does.

  1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

  You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

  2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) The modified work must itself be a software library.

    b) You must cause the files modified to carry prominent notices
    stating that you changed the files and the date of any change.

    c) You must cause the whole of the work to be licensed at no
    charge to all third parties under the terms of this License.

    d) If a facility in the modified Library refers to a function or a
```

```
    table of data to be supplied by an application program that uses
    the facility, other than as an argument passed when the facility
    is invoked, then you must make a good faith effort to ensure that,
    in the event an application does not supply such function or
    table, the facility still operates, and performs whatever part of
    its purpose remains meaningful.

    (For example, a function in a library to compute square roots has
    a purpose that is entirely well-defined independent of the
    application.  Therefore, Subsection 2d requires that any
    application-supplied function or table used by this function must
    be optional: if the application does not supply it, the square
    root function must still compute square roots.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library.  To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License.  (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.)  Do not make any other change in
these notices.

  Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

  This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.
```

```
  4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

  If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

  5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library".  Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

  However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library".  The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

  When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library.  The
threshold for this to be true is not precisely defined by law.

  If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work.  (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

  Otherwise, if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

  6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.
```

```
  You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License.  You must supply a copy of this License.  If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of this License.  Also, you must do one
of these things:

    a) Accompany the work with the complete corresponding
    machine-readable source code for the Library including whatever
    changes were used in the work (which must be distributed under
    Sections 1 and 2 above); and, if the work is an executable linked
    with the Library, with the complete machine-readable "work that
    uses the Library", as object code and/or source code, so that the
    user can modify the Library and then relink to produce a modified
    executable containing the modified Library.  (It is understood
    that the user who changes the contents of definitions files in the
    Library will not necessarily be able to recompile the application
    to use the modified definitions.)

    b) Use a suitable shared library mechanism for linking with the
    Library.  A suitable mechanism is one that (1) uses at run time a
    copy of the library already present on the user's computer system,
    rather than copying library functions into the executable, and (2)
    will operate properly with a modified version of the library, if
    the user installs one, as long as the modified version is
    interface-compatible with the version that the work was made with.

    c) Accompany the work with a written offer, valid for at
    least three years, to give the same user the materials
    specified in Subsection 6a, above, for a charge no more
    than the cost of performing this distribution.

    d) If distribution of the work is made by offering access to copy
    from a designated place, offer equivalent access to copy the above
    specified materials from the same place.

    e) Verify that the user has already received a copy of these
    materials or that you have already sent this user a copy.

  For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it.  However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

  It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
```

```
accompany the operating system.  Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

  7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

    a) Accompany the combined library with a copy of the same work
    based on the Library, uncombined with any other library
    facilities.  This must be distributed under the terms of the
    Sections above.

    b) Give prominent notice with the combined library of the fact
    that part of it is a work based on the Library, and explaining
    where to find the accompanying uncombined form of the same work.

  8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License.  Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License.  However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

  9. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Library or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

  10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

  11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
```

```
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all.  For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded.  In such case, this License incorporates the limitation as if
written in the body of this License.

  13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.  If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation.  If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

  14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission.  For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this.  Our
```

```
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

                            NO WARRANTY

  15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

  16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

                     END OF TERMS AND CONDITIONS

           How to Apply These Terms to Your New Libraries

  If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change.  You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

  To apply these terms, attach the following notices to the library.  It is
safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
```

```
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.

    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library `Frob' (a library for tweaking knobs) written by James Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice

That's all there is to it!
```

## libnl v3.5.0

### libnl License

```
                  GNU LESSER GENERAL PUBLIC LICENSE
                       Version 2.1, February 1999

 Copyright (C) 1991, 1999 Free Software Foundation, Inc.
 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL.  It also counts
 as the successor of the GNU Library Public License, version 2, hence
 the version number 2.1.]

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
Licenses are intended to guarantee your freedom to share and change
free software--to make sure the software is free for all its users.

  This license, the Lesser General Public License, applies to some
specially designated software packages--typically libraries--of the
Free Software Foundation and other authors who decide to use it.  You
```

```
can use it too, but we suggest you first think carefully about whether
this license or the ordinary General Public License is the better
strategy to use in any particular case, based on the explanations below.

  When we speak of free software, we are referring to freedom of use,
not price.  Our General Public Licenses are designed to make sure that
you have the freedom to distribute copies of free software (and charge
for this service if you wish); that you receive source code or can get
it if you want it; that you can change the software and use pieces of
it in new free programs; and that you are informed that you can do
these things.

  To protect your rights, we need to make restrictions that forbid
distributors to deny you these rights or to ask you to surrender these
rights.  These restrictions translate to certain responsibilities for
you if you distribute copies of the library or if you modify it.

  For example, if you distribute copies of the library, whether gratis
or for a fee, you must give the recipients all the rights that we gave
you.  You must make sure that they, too, receive or can get the source
code.  If you link other code with the library, you must provide
complete object files to the recipients, so that they can relink them
with the library after making changes to the library and recompiling
it.  And you must show them these terms so they know their rights.

  We protect your rights with a two-step method: (1) we copyright the
library, and (2) we offer you this license, which gives you legal
permission to copy, distribute and/or modify the library.

  To protect each distributor, we want to make it very clear that
there is no warranty for the free library.  Also, if the library is
modified by someone else and passed on, the recipients should know
that what they have is not the original version, so that the original
author's reputation will not be affected by problems that might be
introduced by others.

  Finally, software patents pose a constant threat to the existence of
any free program.  We wish to make sure that a company cannot
effectively restrict the users of a free program by obtaining a
restrictive license from a patent holder.  Therefore, we insist that
any patent license obtained for a version of the library must be
consistent with the full freedom of use specified in this license.

  Most GNU software, including some libraries, is covered by the
ordinary GNU General Public License.  This license, the GNU Lesser
General Public License, applies to certain designated libraries, and
is quite different from the ordinary General Public License.  We use
this license for certain libraries in order to permit linking those
libraries into non-free programs.

  When a program is linked with a library, whether statically or using
```

```
a shared library, the combination of the two is legally speaking a
combined work, a derivative of the original library.  The ordinary
General Public License therefore permits such linking only if the
entire combination fits its criteria of freedom.  The Lesser General
Public License permits more lax criteria for linking other code with
the library.

  We call this license the "Lesser" General Public License because it
does Less to protect the user's freedom than the ordinary General
Public License.  It also provides other free software developers Less
of an advantage over competing non-free programs.  These disadvantages
are the reason we use the ordinary General Public License for many
libraries.  However, the Lesser license provides advantages in certain
special circumstances.

  For example, on rare occasions, there may be a special need to
encourage the widest possible use of a certain library, so that it becomes
a de-facto standard.  To achieve this, non-free programs must be
allowed to use the library.  A more frequent case is that a free
library does the same job as widely used non-free libraries.  In this
case, there is little to gain by limiting the free library to free
software only, so we use the Lesser General Public License.

  In other cases, permission to use a particular library in non-free
programs enables a greater number of people to use a large body of
free software.  For example, permission to use the GNU C Library in
non-free programs enables many more people to use the whole GNU
operating system, as well as its variant, the GNU/Linux operating
system.

  Although the Lesser General Public License is Less protective of the
users' freedom, it does ensure that the user of a program that is
linked with the Library has the freedom and the wherewithal to run
that program using a modified version of the Library.

  The precise terms and conditions for copying, distribution and
modification follow.  Pay close attention to the difference between a
"work based on the library" and a "work that uses the library".  The
former contains code derived from the library, whereas the latter must
be combined with the library in order to run.

                  GNU LESSER GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License Agreement applies to any software library or other
program which contains a notice placed by the copyright holder or
other authorized party saying it may be distributed under the terms of
this Lesser General Public License (also called "this License").
Each licensee is addressed as "you".

  A "library" means a collection of software functions and/or data
```

```
prepared so as to be conveniently linked with application programs
(which use some of those functions and data) to form executables.

  The "Library", below, refers to any such software library or work
which has been distributed under these terms.  A "work based on the
Library" means either the Library or any derivative work under
copyright law: that is to say, a work containing the Library or a
portion of it, either verbatim or with modifications and/or translated
straightforwardly into another language.  (Hereinafter, translation is
included without limitation in the term "modification".)

  "Source code" for a work means the preferred form of the work for
making modifications to it.  For a library, complete source code means
all the source code for all modules it contains, plus any associated
interface definition files, plus the scripts used to control compilation
and installation of the library.

  Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running a program using the Library is not restricted, and output from
such a program is covered only if its contents constitute a work based
on the Library (independent of the use of the Library in a tool for
writing it).  Whether that is true depends on what the Library does
and what the program that uses the Library does.

  1. You may copy and distribute verbatim copies of the Library's
complete source code as you receive it, in any medium, provided that
you conspicuously and appropriately publish on each copy an
appropriate copyright notice and disclaimer of warranty; keep intact
all the notices that refer to this License and to the absence of any
warranty; and distribute a copy of this License along with the
Library.

  You may charge a fee for the physical act of transferring a copy,
and you may at your option offer warranty protection in exchange for a
fee.

  2. You may modify your copy or copies of the Library or any portion
of it, thus forming a work based on the Library, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) The modified work must itself be a software library.

    b) You must cause the files modified to carry prominent notices
    stating that you changed the files and the date of any change.

    c) You must cause the whole of the work to be licensed at no
    charge to all third parties under the terms of this License.

    d) If a facility in the modified Library refers to a function or a
```

```
    table of data to be supplied by an application program that uses
    the facility, other than as an argument passed when the facility
    is invoked, then you must make a good faith effort to ensure that,
    in the event an application does not supply such function or
    table, the facility still operates, and performs whatever part of
    its purpose remains meaningful.

    (For example, a function in a library to compute square roots has
    a purpose that is entirely well-defined independent of the
    application.  Therefore, Subsection 2d requires that any
    application-supplied function or table used by this function must
    be optional: if the application does not supply it, the square
    root function must still compute square roots.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Library,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Library, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote
it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Library.

In addition, mere aggregation of another work not based on the Library
with the Library (or with a work based on the Library) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may opt to apply the terms of the ordinary GNU General Public
License instead of this License to a given copy of the Library.  To do
this, you must alter all the notices that refer to this License, so
that they refer to the ordinary GNU General Public License, version 2,
instead of to this License.  (If a newer version than version 2 of the
ordinary GNU General Public License has appeared, then you can specify
that version instead if you wish.)  Do not make any other change in
these notices.

  Once this change is made in a given copy, it is irreversible for
that copy, so the ordinary GNU General Public License applies to all
subsequent copies and derivative works made from that copy.

  This option is useful when you wish to copy part of the code of
the Library into a program that is not a library.
```

```
  4. You may copy and distribute the Library (or a portion or
derivative of it, under Section 2) in object code or executable form
under the terms of Sections 1 and 2 above provided that you accompany
it with the complete corresponding machine-readable source code, which
must be distributed under the terms of Sections 1 and 2 above on a
medium customarily used for software interchange.

  If distribution of object code is made by offering access to copy
from a designated place, then offering equivalent access to copy the
source code from the same place satisfies the requirement to
distribute the source code, even though third parties are not
compelled to copy the source along with the object code.

  5. A program that contains no derivative of any portion of the
Library, but is designed to work with the Library by being compiled or
linked with it, is called a "work that uses the Library".  Such a
work, in isolation, is not a derivative work of the Library, and
therefore falls outside the scope of this License.

  However, linking a "work that uses the Library" with the Library
creates an executable that is a derivative of the Library (because it
contains portions of the Library), rather than a "work that uses the
library".  The executable is therefore covered by this License.
Section 6 states terms for distribution of such executables.

  When a "work that uses the Library" uses material from a header file
that is part of the Library, the object code for the work may be a
derivative work of the Library even though the source code is not.
Whether this is true is especially significant if the work can be
linked without the Library, or if the work is itself a library.  The
threshold for this to be true is not precisely defined by law.

  If such an object file uses only numerical parameters, data
structure layouts and accessors, and small macros and small inline
functions (ten lines or less in length), then the use of the object
file is unrestricted, regardless of whether it is legally a derivative
work.  (Executables containing this object code plus portions of the
Library will still fall under Section 6.)

  Otherwise, if the work is a derivative of the Library, you may
distribute the object code for the work under the terms of Section 6.
Any executables containing that work also fall under Section 6,
whether or not they are linked directly with the Library itself.

  6. As an exception to the Sections above, you may also combine or
link a "work that uses the Library" with the Library to produce a
work containing portions of the Library, and distribute that work
under terms of your choice, provided that the terms permit
modification of the work for the customer's own use and reverse
engineering for debugging such modifications.
```

```
  You must give prominent notice with each copy of the work that the
Library is used in it and that the Library and its use are covered by
this License.  You must supply a copy of this License.  If the work
during execution displays copyright notices, you must include the
copyright notice for the Library among them, as well as a reference
directing the user to the copy of this License.  Also, you must do one
of these things:

    a) Accompany the work with the complete corresponding
    machine-readable source code for the Library including whatever
    changes were used in the work (which must be distributed under
    Sections 1 and 2 above); and, if the work is an executable linked
    with the Library, with the complete machine-readable "work that
    uses the Library", as object code and/or source code, so that the
    user can modify the Library and then relink to produce a modified
    executable containing the modified Library.  (It is understood
    that the user who changes the contents of definitions files in the
    Library will not necessarily be able to recompile the application
    to use the modified definitions.)

    b) Use a suitable shared library mechanism for linking with the
    Library.  A suitable mechanism is one that (1) uses at run time a
    copy of the library already present on the user's computer system,
    rather than copying library functions into the executable, and (2)
    will operate properly with a modified version of the library, if
    the user installs one, as long as the modified version is
    interface-compatible with the version that the work was made with.

    c) Accompany the work with a written offer, valid for at
    least three years, to give the same user the materials
    specified in Subsection 6a, above, for a charge no more
    than the cost of performing this distribution.

    d) If distribution of the work is made by offering access to copy
    from a designated place, offer equivalent access to copy the above
    specified materials from the same place.

    e) Verify that the user has already received a copy of these
    materials or that you have already sent this user a copy.

  For an executable, the required form of the "work that uses the
Library" must include any data and utility programs needed for
reproducing the executable from it.  However, as a special exception,
the materials to be distributed need not include anything that is
normally distributed (in either source or binary form) with the major
components (compiler, kernel, and so on) of the operating system on
which the executable runs, unless that component itself accompanies
the executable.

  It may happen that this requirement contradicts the license
restrictions of other proprietary libraries that do not normally
```

```
accompany the operating system.  Such a contradiction means you cannot
use both them and the Library together in an executable that you
distribute.

  7. You may place library facilities that are a work based on the
Library side-by-side in a single library together with other library
facilities not covered by this License, and distribute such a combined
library, provided that the separate distribution of the work based on
the Library and of the other library facilities is otherwise
permitted, and provided that you do these two things:

    a) Accompany the combined library with a copy of the same work
    based on the Library, uncombined with any other library
    facilities.  This must be distributed under the terms of the
    Sections above.

    b) Give prominent notice with the combined library of the fact
    that part of it is a work based on the Library, and explaining
    where to find the accompanying uncombined form of the same work.

  8. You may not copy, modify, sublicense, link with, or distribute
the Library except as expressly provided under this License.  Any
attempt otherwise to copy, modify, sublicense, link with, or
distribute the Library is void, and will automatically terminate your
rights under this License.  However, parties who have received copies,
or rights, from you under this License will not have their licenses
terminated so long as such parties remain in full compliance.

  9. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Library or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Library (or any work based on the
Library), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Library or works based on it.

  10. Each time you redistribute the Library (or any work based on the
Library), the recipient automatically receives a license from the
original licensor to copy, distribute, link with or modify the Library
subject to these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties with
this License.

  11. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
```

```
License and any other pertinent obligations, then as a consequence you
may not distribute the Library at all.  For example, if a patent
license would not permit royalty-free redistribution of the Library by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any
particular circumstance, the balance of the section is intended to apply,
and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  12. If the distribution and/or use of the Library is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Library under this License may add
an explicit geographical distribution limitation excluding those countries,
so that distribution is permitted only in or among countries not thus
excluded.  In such case, this License incorporates the limitation as if
written in the body of this License.

  13. The Free Software Foundation may publish revised and/or new
versions of the Lesser General Public License from time to time.
Such new versions will be similar in spirit to the present version,
but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number.  If the Library
specifies a version number of this License which applies to it and
"any later version", you have the option of following the terms and
conditions either of that version or of any later version published by
the Free Software Foundation.  If the Library does not specify a
license version number, you may choose any version ever published by
the Free Software Foundation.

  14. If you wish to incorporate parts of the Library into other free
programs whose distribution conditions are incompatible with these,
write to the author to ask for permission.  For software which is
copyrighted by the Free Software Foundation, write to the Free
Software Foundation; we sometimes make exceptions for this.  Our
```

```
decision will be guided by the two goals of preserving the free status
of all derivatives of our free software and of promoting the sharing
and reuse of software generally.

                            NO WARRANTY

  15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO
WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW.
EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR
OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY
KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
PURPOSE.  THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE
LIBRARY IS WITH YOU.  SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME
THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

  16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN
WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY
AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU
FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE
LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING
RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A
FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF
SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGES.

                     END OF TERMS AND CONDITIONS

           How to Apply These Terms to Your New Libraries

  If you develop a new library, and you want it to be of the greatest
possible use to the public, we recommend making it free software that
everyone can redistribute and change.  You can do so by permitting
redistribution under these terms (or, alternatively, under the terms of the
ordinary General Public License).

  To apply these terms, attach the following notices to the library.  It is
safest to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least the
"copyright" line and a pointer to where the full notice is found.

    <one line to give the library's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This library is free software; you can redistribute it and/or
    modify it under the terms of the GNU Lesser General Public
    License as published by the Free Software Foundation; either
    version 2.1 of the License, or (at your option) any later version.

    This library is distributed in the hope that it will be useful,
```

```
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the GNU
    Lesser General Public License for more details.

    You should have received a copy of the GNU Lesser General Public
    License along with this library; if not, write to the Free Software
    Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA  02110-1301  USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the library, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the
  library `Frob' (a library for tweaking knobs) written by James Random Hacker.

  <signature of Ty Coon>, 1 April 1990
  Ty Coon, President of Vice

That's all there is to it!
```

## lz4 v1.9.4

### lz4 License

```
This repository uses 2 different licenses :
- all files in the `lib` directory use a BSD 2-Clause license
- all other files use a GPLv2 license, unless explicitly stated otherwise

Relevant license is reminded at the top of each source file,
and with presence of COPYING or LICENSE file in associated directories.

This model is selected to emphasize that
files in the `lib` directory are designed to be included into 3rd party applications,
while all other files, in `programs`, `tests` or `examples`,
are intended to be used "as is", as part of their intended scenarios,
with no intention to support 3rd party integration use cases.
```

### lz4 Library License

```
LZ4 Library
Copyright (c) 2011-2020, Yann Collet
All rights reserved.

Redistribution and use in source and binary forms, with or without modification,
```

```
are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice, this
  list of conditions and the following disclaimer.

* Redistributions in binary form must reproduce the above copyright notice, this
  list of conditions and the following disclaimer in the documentation and/or
  other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

**xxHash Library License**

```
xxHash - Extremely Fast Hash algorithm
Header File
Copyright (C) 2012-2016, Yann Collet.

BSD 2-Clause License (http://www.opensource.org/licenses/bsd-license.php)

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

```
You can contact the author at :
- xxHash source repository : https://github.com/Cyan4973/xxHash
```

**lz4 file programs/lz4io.c License**

```
LZ4io.c - LZ4 File/Stream Interface
Copyright (C) Yann Collet 2011-2020

GPL v2 License

This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License as published by
the Free Software Foundation; either version 2 of the License, or
(at your option) any later version.

This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
GNU General Public License for more details.

You should have received a copy of the GNU General Public License along
with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

You can contact the author at :
- LZ4 source repository : https://github.com/lz4/lz4
- LZ4 public forum : https://groups.google.com/forum/#!forum/lz4c

Note : this is stand-alone program.
It is not part of LZ4 compression library, it is a user code of the LZ4 library.
- The license of LZ4 library is BSD.
- The license of xxHash library is BSD.
- The license of this source file is GPLv2.

----------------------------------------

                    GNU GENERAL PUBLIC LICENSE
                       Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.,
 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                            Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
```

```
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Lesser General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.

  To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

                    GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
```

```
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.

  1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
```

```
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,

    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
```

```
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
signed it.  However, nothing else grants you permission to modify or
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
```

integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                            NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

```
  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

                     END OF TERMS AND CONDITIONS

            How to Apply These Terms to Your New Programs

  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.

    You should have received a copy of the GNU General Public License along
    with this program; if not, write to the Free Software Foundation, Inc.,
    51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.
```

```
The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
  Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Lesser General
Public License instead of this License.
```

## protobuf v3.15.8

### protobuf License

```
Copyright 2008 Google Inc.  All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.
    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.
    * Neither the name of Google Inc. nor the names of its
contributors may be used to endorse or promote products derived from
this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
```

```
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Code generated by the Protocol Buffer compiler is owned by the owner
of the input file used when generating it.  This code is not
standalone and requires a support library to be linked with it.  This
support library is itself covered by the above license.
```

## protobuf-c v1.4.1

### protobuf-c License

```
Copyright (c) 2008-2022, Dave Benson and the protobuf-c authors.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

    * Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

    * Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with the
distribution.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The code generated by the protoc-gen-c code generator and by the
protoc-c compiler is owned by the owner of the input files used when
generating it. This code is not standalone and requires a support
library to be linked with it. This support library is covered by the
above license.
```

### zlib v1.3.1

#### zlib License

```
Copyright (C) 1995-2024 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied
warranty.  In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not
   claim that you wrote the original software. If you use this software
   in a product, an acknowledgment in the product documentation would be
   appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
   misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly        Mark Adler
jloup@gzip.org          madler@alumni.caltech.edu
```

---

# Module java.desktop

### Eastman Kodak Company: Portions of color management and imaging software

#### Eastman Kodak Notice

```
Portions Copyright Eastman Kodak Company 1991-2003
```

```
/* ****************************************************************
 ****************************************************************
 ****************************************************************
 *** COPYRIGHT (c) Eastman Kodak Company, 1997
 *** As  an unpublished  work pursuant to Title 17 of the United
 *** States Code.  All rights reserved.
 ****************************************************************
 ****************************************************************
 ****************************************************************/
```

## GIFLIB v5.2.2

### GIFLIB License

```
The GIFLIB distribution is Copyright (c) 1997  Eric S. Raymond

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN
THE SOFTWARE.


tree/README

== Authors ==

Gershon Elber <gershon[AT]cs.technion.sc.il>
original giflib code

Toshio Kuratomi <toshio[AT]tiki-lounge.com>
uncompressed gif writing code
former maintainer

Eric Raymond <esr[AT]snark.thyrsus.com>
current as well as long time former maintainer of giflib code

There have been many other contributors; see the attributions in the
version-control history to learn more.


tree/openbsd-reallocarray.c

Copyright (C) 2008 Otto Moerbeek <otto@drijf.net>
SPDX-License-Identifier: MIT
```

## Harfbuzz 11.2.0

### Harfbuzz License

```
HarfBuzz is licensed under the so-called "Old MIT" license.  Details follow.
For parts of HarfBuzz that are licensed under different licenses see individual
files names COPYING in subdirectories where applicable.

Copyright © 2010-2024  Google, Inc.
Copyright © 2018-2020  Ebrahim Byagowi
Copyright © 2004-2013  Red Hat, Inc.
Copyright © 2019  Facebook, Inc.
Copyright (C) 2012 Zilong Tan (eric.zltan@gmail.com)
Copyright © 2007  Chris Wilson
Copyright © 2018-2019 Adobe Inc.
Copyright © 2006-2025 Behdad Esfahbod
Copyright © 1998-2004  David Turner and Werner Lemberg
Copyright © 2009  Keith Stribley
Copyright © 2018  Khaled Hosny
Copyright © 2016  Elie Roux <elie.roux@telecom-bretagne.eu>
Copyright © 2016  Igalia S.L.
Copyright © 2015  Mozilla Foundation.
Copyright © 1999  David Turner
Copyright © 2005  Werner Lemberg
Copyright © 2013-2015  Alexei Podtelezhnikov
Copyright © 2022 Matthias Clasen
Copyright © 2011  Codethink Limited

For full copyright notices consult the individual files in the package.


Permission is hereby granted, without written agreement and without
license or royalty fees, to use, copy, modify, and distribute this
software and its documentation for any purpose, provided that the
above copyright notice and the following two paragraphs appear in
all copies of this software.

IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE TO ANY PARTY FOR
DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES
ARISING OUT OF THE USE OF THIS SOFTWARE AND ITS DOCUMENTATION, EVEN
IF THE COPYRIGHT HOLDER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH
DAMAGE.

THE COPYRIGHT HOLDER SPECIFICALLY DISCLAIMS ANY WARRANTIES, INCLUDING,
BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS FOR A PARTICULAR PURPOSE.  THE SOFTWARE PROVIDED HEREUNDER IS
ON AN "AS IS" BASIS, AND THE COPYRIGHT HOLDER HAS NO OBLIGATION TO
PROVIDE MAINTENANCE, SUPPORT, UPDATES, ENHANCEMENTS, OR MODIFICATIONS.
```

```
All source code, except for one section, is licensed as above. The one
exception is licensed with a slightly different MIT variant:
The contents of this directory are licensed under the following terms:

---------------------------------
The below applies to the following file(s):
libharfbuzz/hb-ucd.cc

Copyright (C) 2012 Grigori Goronzy <greg@kinoho.net>

Permission to use, copy, modify, and/or distribute this software for any
purpose with or without fee is hereby granted, provided that the above
copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS" AND THE AUTHOR DISCLAIMS ALL WARRANTIES
WITH REGARD TO THIS SOFTWARE INCLUDING ALL IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS. IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR
ANY SPECIAL, DIRECT, INDIRECT, OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN
ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF
OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

---------------------------------
The below applies to the following file(s):
libharfbuzz/hb-unicode-emoji-table.hh

© 2024 Unicode®, Inc.

Unicode and the Unicode Logo are registered trademarks of Unicode, Inc.
in the U.S. and other countries.
For terms of use and license, see https://www.unicode.org/terms_of_use.html
```

**AUTHORS File Information**

```
Behdad Esfahbod
David Corbett
David Turner
Ebrahim Byagowi
Garret Rieger
Jonathan Kew
Khaled Hosny
Lars Knoll
Martin Hosken
Owen Taylor
Roderick Sheeter
Roozbeh Pournader
Simon Hausmann
Werner Lemberg
```

## Independent JPEG Group: JPEG release 6b

### JPEG License

```
************************************************************************

Copyright (C) 1991-1998, Thomas G. Lane.

This software is the work of Tom Lane, Philip Gladstone, Jim Boucher,
Lee Crocker, Julian Minguillon, Luis Ortiz, George Phillips, Davide Rossi,
Guido Vollbeding, Ge' Weijers, and other members of the Independent JPEG
Group.

IJG is not affiliated with the official ISO JPEG standards committee.

The authors make NO WARRANTY or representation, either express or implied,
with respect to this software, its quality, accuracy, merchantability, or
fitness for a particular purpose.  This software is provided "AS IS",
and you, its user, assume the entire risk as to its quality and accuracy.

This software is copyright (C) 1991-1998, Thomas G. Lane.
All Rights Reserved except as specified below.

Permission is hereby granted to use, copy, modify, and distribute
this software (or portions thereof) for any purpose, without fee,
subject to these conditions:

(1) If any part of the source code for this software is distributed,
then this README file must be included, with this copyright and no-warranty
notice unaltered; and any additions, deletions, or changes to the original
files must be clearly indicated in accompanying documentation.

(2) If only executable code is distributed, then the accompanying documentation
must state that "this software is based in part on the work of the
Independent JPEG Group".

(3) Permission for use of this software is granted only if the user accepts
full responsibility for any undesirable consequences; the authors accept
NO LIABILITY for damages of any kind.

These conditions apply to any software derived from or based on the IJG code,
not just to the unmodified library.  If you use our work, you ought to
acknowledge us.

Permission is NOT granted for the use of any IJG author's name or company name
in advertising or publicity relating to this software or products derived
from it.  This software may be referred to only as "the Independent JPEG
Group's software".
```

```
We specifically permit and encourage the use of this software as the basis
of commercial products, provided that all warranty or liability claims are
assumed by the product vendor.

It appears that the arithmetic coding option of the JPEG spec is covered
by patents owned by IBM, AT&T, and Mitsubishi.  Hence arithmetic coding
cannot legally be used without obtaining one or more licenses.  For this
reason, support for arithmetic coding has been removed from the free
JPEG software. (Since arithmetic coding provides only a marginal gain
over the unpatented Huffman mode, it is unlikely that very many
implementations will support it.) So far as we are aware, there are
no patent restrictions on the remaining code.

The IJG distribution formerly included code to read and write GIF files.
To avoid entanglement with the Unisys LZW patent, GIF reading support
has been removed altogether, and the GIF writer has been simplified to
produce "uncompressed GIFs".  This technique does not use the LZW algorithm;
the resulting GIF files are larger than usual, but are readable by all
standard GIF decoders.

We are required to state that "The Graphics Interchange Format(c) is
the Copyright property of CompuServe Incorporated.  GIF(sm) is a
Service Mark property of CompuServe Incorporated."

*****************************************************************************
```

## Little Color Management System (LCMS) v2.17

### LCMS License

```
MIT License

Copyright (C) 1998-2025 Marti Maria Saguer

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the Software
is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO
THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
```

```
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

---------------------------------
The below applies to the following file(s):
liblcms/cmssm.c

Copyright (C) 2001, softSurfer (www.softsurfer.com)

This code may be freely used and modified for any purpose
providing that this copyright notice is included with it.
SoftSurfer makes no warranty for this code, and cannot be held
liable for any real or imagined damage resulting from its use.
Users of this code must verify correctness for their application.
```

**AUTHORS File Information**

```
Main Author
------------
Marti Maria


Contributors
------------
Bob Friesenhahn
Kai-Uwe Behrmann
Stuart Nixon
Jordi Vilar
Richard Hughes
Auke Nauta
Chris Evans (Google)
Lorenzo Ridolfi
Robin Watts (Artifex)
Shawn Pedersen
Andrew Brygin
Samuli Suominen
Florian H□ch
Aurelien Jarno
Claudiu Cebuc
Michael Vhrel (Artifex)
Michal Cihar
Daniel Kaneider
Mateusz Jurczyk (Google)
Paul Miller
SÈbastien LÈon
Christian Schmitz
XhmikosR
Stanislav Brabec (SuSe)
Leonhard Gruenschloss (Google)
```

```
Patrick Noffke
Christopher James Halse Rogers
John Hein
Thomas Weber (Debian)
Mark Allen
Noel Carboni
Sergei Trofimovic
Philipp Knechtges
Amyspark
Lovell Fuller
Eli Schwartz
Diogo Teles Sant'Anna

Special Thanks
--------------
Artifex software
AlienSkin software
libVIPS
Jan Morovic
Jos Vernon (WebSupergoo)
Harald Schneider (Maxon)
Christian Albrecht
Dimitrios Anastassakis
Lemke Software
Tim Zaman
Amir Montazery and Open Source Technology Improvement Fund (ostif.org), Google, for
fuzzer fundings.
```

## Mesa 3-D Graphics Library v21.0.3

### Mesa License

```
Copyright (C) 1999-2007  Brian Paul   All Rights Reserved.

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL
THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
```

```
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.

Attention, Contributors

When contributing to the Mesa project you must agree to the licensing terms
of the component to which you're contributing.
The following section lists the primary components of the Mesa distribution
and their respective licenses.
Mesa Component Licenses



Component         Location               License
-----------------------------------------------------------------
Main Mesa code    src/mesa/              MIT
Device drivers    src/mesa/drivers/*     MIT, generally

Gallium code      src/gallium/           MIT

Ext headers       GL/glext.h             Khronos
                  GL/glxext.h            Khronos
                  GL/wglext.h            Khronos
                  KHR/khrplatform.h      Khronos

*******************************************************************************

----
include/GL/gl.h :


 Mesa 3-D graphics library

 Copyright (C) 1999-2006  Brian Paul   All Rights Reserved.
 Copyright (C) 2009  VMware, Inc.  All Rights Reserved.

 Permission is hereby granted, free of charge, to any person obtaining a
 copy of this software and associated documentation files (the "Software"),
 to deal in the Software without restriction, including without limitation
 the rights to use, copy, modify, merge, publish, distribute, sublicense,
 and/or sell copies of the Software, and to permit persons to whom the
 Software is furnished to do so, subject to the following conditions:

 The above copyright notice and this permission notice shall be included
 in all copies or substantial portions of the Software.

 THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
 OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
 FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL
 THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR
```

```
 OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
 ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
 OTHER DEALINGS IN THE SOFTWARE.

 ******************************************************************************


----
include/GL/glext.h
include/GL/glxext.h
include/GL/wglxext.h :


 Copyright (c) 2013 - 2018 The Khronos Group Inc.

 Permission is hereby granted, free of charge, to any person obtaining a
 copy of this software and/or associated documentation files (the
 "Materials"), to deal in the Materials without restriction, including
 without limitation the rights to use, copy, modify, merge, publish,
 distribute, sublicense, and/or sell copies of the Materials, and to
 permit persons to whom the Materials are furnished to do so, subject to
 the following conditions:

 The above copyright notice and this permission notice shall be included
 in all copies or substantial portions of the Materials.

 THE MATERIALS ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
 EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
 MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
 IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
 CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
 TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
 MATERIALS OR THE USE OR OTHER DEALINGS IN THE MATERIALS.

 ******************************************************************************


----
include/KHR/khrplatform.h :

 Copyright (c) 2008 - 2018 The Khronos Group Inc.

 Permission is hereby granted, free of charge, to any person obtaining a
 copy of this software and/or associated documentation files (the
 "Materials"), to deal in the Materials without restriction, including
 without limitation the rights to use, copy, modify, merge, publish,
 distribute, sublicense, and/or sell copies of the Materials, and to
 permit persons to whom the Materials are furnished to do so, subject to
 the following conditions:

 The above copyright notice and this permission notice shall be included
 in all copies or substantial portions of the Materials.
```

```
THE MATERIALS ARE PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT,
TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE
MATERIALS OR THE USE OR OTHER DEALINGS IN THE MATERIALS.

******************************************************************************
```

## PipeWire 1.3.81

**PipeWire license:**

All PipeWire header files are licensed under the MIT License:

```
Copyright © 2018-2023 Wim Taymans

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice (including the next
paragraph) shall be included in all copies or substantial portions of the
Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL
THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING
FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER
DEALINGS IN THE SOFTWARE.
```

The below copyright applies to the following files:

spa/include/spa/monitor/type-info.h

```
Copyright © 2021 Collabora Ltd.
```

spa/include/spa/utils/string.h

```
Copyright © 2021 Red Hat, Inc.
```

spa/utils/cleanup.h:

```
Copyright © 2023 PipeWire authors
```

---

## The FreeType Project: Freetype v2.13.3

### FreeType Notice

```
FreeType comes with two licenses from which you can choose the one
which fits your needs best.

    The FreeType License (FTL) is the most commonly used one. It is
    a BSD-style license with a credit clause and thus compatible with
    the GNU Public License (GPL) version 3, but not with the
    GPL version 2.

    The GNU General Public License (GPL), version 2. Use it for all
    projects which use the GPLv2 also, or which need a license
    compatible to the GPLv2.
```

### FreeType License

```
Copyright (C) 1996-2024 by David Turner, Robert Wilhelm, and Werner Lemberg.
Copyright (C) 2007-2024 by Dereg Clegg and Michael Toftdal.
Copyright (C) 1996-2024 by Just van Rossum, David Turner, Robert Wilhelm, and Werner
Lemberg.
Copyright (C) 2022-2024 by David Turner, Robert Wilhelm, Werner Lemberg, George
Williams, and
Copyright (C) 2004-2024 by Masatake YAMATO and Redhat K.K.
Copyright (C) 2007-2024 by Derek Clegg and Michael Toftdal.
Copyright (C) 2003-2024 by Masatake YAMATO, Red Hat K.K.,
Copyright (C) 1996-2024 by David Turner, Robert Wilhelm, Werner Lemberg, and Dominik
Röttsches.
Copyright (C) 2007-2024 by David Turner.
Copyright (C) 2022-2024 by David Turner, Robert Wilhelm, Werner Lemberg, and Moazin
Khatti.
Copyright (C) 2007-2024 by Rahul Bhalerao <rahul.bhalerao@redhat.com>,
<b.rahul.pm@gmail.com>.
Copyright (C) 2008-2024 by David Turner, Robert Wilhelm, Werner Lemberg, and suzuki
toshiya.
Copyright (C) 2013-2024 by Google, Inc.
Copyright (C) 2019-2024 by Nikhil Ramakrishnan, David Turner, Robert Wilhelm, and
Werner Lemberg.
```

```
Copyright (C) 2009-2024 by Oran Agra and Mickey Gabel.
Copyright (C) 2018-2024 by David Turner, Robert Wilhelm, Dominik Röttsches, and Werner
Lemberg.
Copyright (C) 2004-2024 by David Turner, Robert Wilhelm, Werner Lemberg, and George
Williams.


                    The FreeType Project LICENSE
                    ----------------------------

                            2006-Jan-27

                    Copyright 1996-2002, 2006 by
          David Turner, Robert Wilhelm, and Werner Lemberg



Introduction
============

  The FreeType  Project is distributed in  several archive packages;
  some of them may contain, in addition to the FreeType font engine,
  various tools and  contributions which rely on, or  relate to, the
  FreeType Project.

  This  license applies  to all  files found  in such  packages, and
  which do not  fall under their own explicit  license.  The license
  affects  thus  the  FreeType   font  engine,  the  test  programs,
  documentation and makefiles, at the very least.

  This  license   was  inspired  by  the  BSD,   Artistic,  and  IJG
  (Independent JPEG  Group) licenses, which  all encourage inclusion
  and  use of  free  software in  commercial  and freeware  products
  alike.  As a consequence, its main points are that:

    o We don't promise that this software works. However, we will be
      interested in any kind of bug reports. (`as is' distribution)

    o You can  use this software for whatever you  want, in parts or
      full form, without having to pay us. (`royalty-free' usage)

    o You may not pretend that  you wrote this software.  If you use
      it, or  only parts of it,  in a program,  you must acknowledge
      somewhere  in  your  documentation  that  you  have  used  the
      FreeType code. (`credits')

  We  specifically  permit  and  encourage  the  inclusion  of  this
  software, with  or without modifications,  in commercial products.
  We  disclaim  all warranties  covering  The  FreeType Project  and
  assume no liability related to The FreeType Project.
```

```
  Finally, many people asked us for a preferred form for a
  credit/disclaimer to use in compliance with this license.  We thus
  encourage you to use the following text:

   """
    Portions of this software are copyright © <year> The FreeType
    Project (www.freetype.org).  All rights reserved.
   """

  Please replace <year> with the value from the FreeType version you
  actually use.


Legal Terms
===========

0. Definitions
--------------

  Throughout this license,  the terms `package', `FreeType Project',
  and  `FreeType  archive' refer  to  the  set  of files  originally
  distributed  by the  authors  (David Turner,  Robert Wilhelm,  and
  Werner Lemberg) as the `FreeType Project', be they named as alpha,
  beta or final release.

  `You' refers to  the licensee, or person using  the project, where
  `using' is a generic term including compiling the project's source
  code as  well as linking it  to form a  `program' or `executable'.
  This  program is  referred to  as  `a program  using the  FreeType
  engine'.

  This  license applies  to all  files distributed  in  the original
  FreeType  Project,   including  all  source   code,  binaries  and
  documentation,  unless  otherwise  stated   in  the  file  in  its
  original, unmodified form as  distributed in the original archive.
  If you are  unsure whether or not a particular  file is covered by
  this license, you must contact us to verify this.

  The FreeType  Project is copyright (C) 1996-2000  by David Turner,
  Robert Wilhelm, and Werner Lemberg.  All rights reserved except as
  specified below.

1. No Warranty
--------------

  THE FREETYPE PROJECT  IS PROVIDED `AS IS' WITHOUT  WARRANTY OF ANY
  KIND, EITHER  EXPRESS OR IMPLIED,  INCLUDING, BUT NOT  LIMITED TO,
  WARRANTIES  OF  MERCHANTABILITY   AND  FITNESS  FOR  A  PARTICULAR
  PURPOSE.  IN NO EVENT WILL ANY OF THE AUTHORS OR COPYRIGHT HOLDERS
  BE LIABLE  FOR ANY DAMAGES CAUSED  BY THE USE OR  THE INABILITY TO
```

```
  USE, OF THE FREETYPE PROJECT.

2. Redistribution
-----------------

  This  license  grants  a  worldwide, royalty-free,  perpetual  and
  irrevocable right  and license to use,  execute, perform, compile,
  display,  copy,  create  derivative  works  of,  distribute  and
  sublicense the  FreeType Project (in  both source and  object code
  forms)  and  derivative works  thereof  for  any  purpose; and  to
  authorize others  to exercise  some or all  of the  rights granted
  herein, subject to the following conditions:

    o Redistribution of  source code  must retain this  license file
      (`FTL.TXT') unaltered; any  additions, deletions or changes to
      the original  files must be clearly  indicated in accompanying
      documentation.  The  copyright  notices  of  the  unaltered,
      original  files must  be  preserved in  all  copies of  source
      files.

    o Redistribution in binary form must provide a  disclaimer  that
      states  that  the software is based in part of the work of the
      FreeType Team,  in  the  distribution  documentation.  We also
      encourage you to put an URL to the FreeType web page  in  your
      documentation, though this isn't mandatory.

  These conditions  apply to any  software derived from or  based on
  the FreeType Project,  not just the unmodified files.  If you use
  our work, you  must acknowledge us.  However, no  fee need be paid
  to us.

3. Advertising
--------------

  Neither the  FreeType authors and  contributors nor you  shall use
  the name of the  other for commercial, advertising, or promotional
  purposes without specific prior written permission.

  We suggest,  but do not require, that  you use one or  more of the
  following phrases to refer  to this software in your documentation
  or advertising  materials: `FreeType Project',  `FreeType Engine',
  `FreeType library', or `FreeType Distribution'.

  As  you have  not signed  this license,  you are  not  required to
  accept  it.  However,  as  the FreeType  Project  is  copyrighted
  material, only  this license, or  another one contracted  with the
  authors, grants you  the right to use, distribute,  and modify it.
  Therefore,  by  using,  distributing,  or modifying  the  FreeType
  Project, you indicate that you understand and accept all the terms
  of this license.
```

```
4. Contacts
-----------

  There are two mailing lists related to FreeType:

    o freetype@nongnu.org

      Discusses general use and applications of FreeType, as well as
      future and  wanted additions to the  library and distribution.
      If  you are looking  for support,  start in  this list  if you
      haven't found anything to help you in the documentation.

    o freetype-devel@nongnu.org

      Discusses bugs,  as well  as engine internals,  design issues,
      specific licenses, porting, etc.

  Our home page can be found at

    https://www.freetype.org
```

**GPL v2**

```
            GNU GENERAL PUBLIC LICENSE
               Version 2, June 1991

 Copyright (C) 1989, 1991 Free Software Foundation, Inc.
     51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA
 Everyone is permitted to copy and distribute verbatim copies
 of this license document, but changing it is not allowed.

                Preamble

  The licenses for most software are designed to take away your
freedom to share and change it.  By contrast, the GNU General Public
License is intended to guarantee your freedom to share and change free
software--to make sure the software is free for all its users.  This
General Public License applies to most of the Free Software
Foundation's software and to any other program whose authors commit to
using it.  (Some other Free Software Foundation software is covered by
the GNU Library General Public License instead.)  You can apply it to
your programs, too.

  When we speak of free software, we are referring to freedom, not
price.  Our General Public Licenses are designed to make sure that you
have the freedom to distribute copies of free software (and charge for
this service if you wish), that you receive source code or can get it
if you want it, that you can change the software or use pieces of it
in new free programs; and that you know you can do these things.
```

```
  To protect your rights, we need to make restrictions that forbid
anyone to deny you these rights or to ask you to surrender the rights.
These restrictions translate to certain responsibilities for you if you
distribute copies of the software, or if you modify it.

  For example, if you distribute copies of such a program, whether
gratis or for a fee, you must give the recipients all the rights that
you have.  You must make sure that they, too, receive or can get the
source code.  And you must show them these terms so they know their
rights.

  We protect your rights with two steps: (1) copyright the software, and
(2) offer you this license which gives you legal permission to copy,
distribute and/or modify the software.

  Also, for each author's protection and ours, we want to make certain
that everyone understands that there is no warranty for this free
software.  If the software is modified by someone else and passed on, we
want its recipients to know that what they have is not the original, so
that any problems introduced by others will not reflect on the original
authors' reputations.

  Finally, any free program is threatened constantly by software
patents.  We wish to avoid the danger that redistributors of a free
program will individually obtain patent licenses, in effect making the
program proprietary.  To prevent this, we have made it clear that any
patent must be licensed for everyone's free use or not licensed at all.

  The precise terms and conditions for copying, distribution and
modification follow.

            GNU GENERAL PUBLIC LICENSE
   TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

  0. This License applies to any program or other work which contains
a notice placed by the copyright holder saying it may be distributed
under the terms of this General Public License.  The "Program", below,
refers to any such program or work, and a "work based on the Program"
means either the Program or any derivative work under copyright law:
that is to say, a work containing the Program or a portion of it,
either verbatim or with modifications and/or translated into another
language.  (Hereinafter, translation is included without limitation in
the term "modification".)  Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not
covered by this License; they are outside its scope.  The act of
running the Program is not restricted, and the output from the Program
is covered only if its contents constitute a work based on the
Program (independent of having been made by running the Program).
Whether that is true depends on what the Program does.
```

```
  1. You may copy and distribute verbatim copies of the Program's
source code as you receive it, in any medium, provided that you
conspicuously and appropriately publish on each copy an appropriate
copyright notice and disclaimer of warranty; keep intact all the
notices that refer to this License and to the absence of any warranty;
and give any other recipients of the Program a copy of this License
along with the Program.

You may charge a fee for the physical act of transferring a copy, and
you may at your option offer warranty protection in exchange for a fee.

  2. You may modify your copy or copies of the Program or any portion
of it, thus forming a work based on the Program, and copy and
distribute such modifications or work under the terms of Section 1
above, provided that you also meet all of these conditions:

    a) You must cause the modified files to carry prominent notices
    stating that you changed the files and the date of any change.

    b) You must cause any work that you distribute or publish, that in
    whole or in part contains or is derived from the Program or any
    part thereof, to be licensed as a whole at no charge to all third
    parties under the terms of this License.

    c) If the modified program normally reads commands interactively
    when run, you must cause it, when started running for such
    interactive use in the most ordinary way, to print or display an
    announcement including an appropriate copyright notice and a
    notice that there is no warranty (or else, saying that you provide
    a warranty) and that users may redistribute the program under
    these conditions, and telling the user how to view a copy of this
    License.  (Exception: if the Program itself is interactive but
    does not normally print such an announcement, your work based on
    the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole.  If
identifiable sections of that work are not derived from the Program,
and can be reasonably considered independent and separate works in
themselves, then this License, and its terms, do not apply to those
sections when you distribute them as separate works.  But when you
distribute the same sections as part of a whole which is a work based
on the Program, the distribution of the whole must be on the terms of
this License, whose permissions for other licensees extend to the
entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest
your rights to work written entirely by you; rather, the intent is to
exercise the right to control the distribution of derivative or
collective works based on the Program.

In addition, mere aggregation of another work not based on the Program
```

```
with the Program (or with a work based on the Program) on a volume of
a storage or distribution medium does not bring the other work under
the scope of this License.

  3. You may copy and distribute the Program (or a work based on it,
under Section 2) in object code or executable form under the terms of
Sections 1 and 2 above provided that you also do one of the following:

    a) Accompany it with the complete corresponding machine-readable
    source code, which must be distributed under the terms of Sections
    1 and 2 above on a medium customarily used for software interchange; or,

    b) Accompany it with a written offer, valid for at least three
    years, to give any third party, for a charge no more than your
    cost of physically performing source distribution, a complete
    machine-readable copy of the corresponding source code, to be
    distributed under the terms of Sections 1 and 2 above on a medium
    customarily used for software interchange; or,

    c) Accompany it with the information you received as to the offer
    to distribute corresponding source code.  (This alternative is
    allowed only for noncommercial distribution and only if you
    received the program in object code or executable form with such
    an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for
making modifications to it.  For an executable work, complete source
code means all the source code for all modules it contains, plus any
associated interface definition files, plus the scripts used to
control compilation and installation of the executable.  However, as a
special exception, the source code distributed need not include
anything that is normally distributed (in either source or binary
form) with the major components (compiler, kernel, and so on) of the
operating system on which the executable runs, unless that component
itself accompanies the executable.

If distribution of executable or object code is made by offering
access to copy from a designated place, then offering equivalent
access to copy the source code from the same place counts as
distribution of the source code, even though third parties are not
compelled to copy the source along with the object code.

  4. You may not copy, modify, sublicense, or distribute the Program
except as expressly provided under this License.  Any attempt
otherwise to copy, modify, sublicense or distribute the Program is
void, and will automatically terminate your rights under this License.
However, parties who have received copies, or rights, from you under
this License will not have their licenses terminated so long as such
parties remain in full compliance.

  5. You are not required to accept this License, since you have not
```

```
signed it.  However, nothing else grants you permission to modify or
distribute the Program or its derivative works.  These actions are
prohibited by law if you do not accept this License.  Therefore, by
modifying or distributing the Program (or any work based on the
Program), you indicate your acceptance of this License to do so, and
all its terms and conditions for copying, distributing or modifying
the Program or works based on it.

  6. Each time you redistribute the Program (or any work based on the
Program), the recipient automatically receives a license from the
original licensor to copy, distribute or modify the Program subject to
these terms and conditions.  You may not impose any further
restrictions on the recipients' exercise of the rights granted herein.
You are not responsible for enforcing compliance by third parties to
this License.

  7. If, as a consequence of a court judgment or allegation of patent
infringement or for any other reason (not limited to patent issues),
conditions are imposed on you (whether by court order, agreement or
otherwise) that contradict the conditions of this License, they do not
excuse you from the conditions of this License.  If you cannot
distribute so as to satisfy simultaneously your obligations under this
License and any other pertinent obligations, then as a consequence you
may not distribute the Program at all.  For example, if a patent
license would not permit royalty-free redistribution of the Program by
all those who receive copies directly or indirectly through you, then
the only way you could satisfy both it and this License would be to
refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under
any particular circumstance, the balance of the section is intended to
apply and the section as a whole is intended to apply in other
circumstances.

It is not the purpose of this section to induce you to infringe any
patents or other property right claims or to contest validity of any
such claims; this section has the sole purpose of protecting the
integrity of the free software distribution system, which is
implemented by public license practices.  Many people have made
generous contributions to the wide range of software distributed
through that system in reliance on consistent application of that
system; it is up to the author/donor to decide if he or she is willing
to distribute software through any other system and a licensee cannot
impose that choice.

This section is intended to make thoroughly clear what is believed to
be a consequence of the rest of this License.

  8. If the distribution and/or use of the Program is restricted in
certain countries either by patents or by copyrighted interfaces, the
original copyright holder who places the Program under this License
```

```
may add an explicit geographical distribution limitation excluding
those countries, so that distribution is permitted only in or among
countries not thus excluded.  In such case, this License incorporates
the limitation as if written in the body of this License.

  9. The Free Software Foundation may publish revised and/or new versions
of the General Public License from time to time.  Such new versions will
be similar in spirit to the present version, but may differ in detail to
address new problems or concerns.

Each version is given a distinguishing version number.  If the Program
specifies a version number of this License which applies to it and "any
later version", you have the option of following the terms and conditions
either of that version or of any later version published by the Free
Software Foundation.  If the Program does not specify a version number of
this License, you may choose any version ever published by the Free Software
Foundation.

  10. If you wish to incorporate parts of the Program into other free
programs whose distribution conditions are different, write to the author
to ask for permission.  For software which is copyrighted by the Free
Software Foundation, write to the Free Software Foundation; we sometimes
make exceptions for this.  Our decision will be guided by the two goals
of preserving the free status of all derivatives of our free software and
of promoting the sharing and reuse of software generally.

                NO WARRANTY

  11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY
FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW.  EXCEPT WHEN
OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES
PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED
OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF
MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  THE ENTIRE RISK AS
TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU.  SHOULD THE
PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING,
REPAIR OR CORRECTION.

  12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING
WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR
REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES,
INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING
OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED
TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY
YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER
PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE
POSSIBILITY OF SUCH DAMAGES.

             END OF TERMS AND CONDITIONS

        How to Apply These Terms to Your New Programs
```

```
  If you develop a new program, and you want it to be of the greatest
possible use to the public, the best way to achieve this is to make it
free software which everyone can redistribute and change under these terms.

  To do so, attach the following notices to the program.  It is safest
to attach them to the start of each source file to most effectively
convey the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software; you can redistribute it and/or modify
    it under the terms of the GNU General Public License as published by
    the Free Software Foundation; either version 2 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU General Public License for more details.

    You should have received a copy of the GNU General Public License
    along with this program; if not, write to the Free Software
    Foundation, Inc., 51 Franklin St, Fifth Floor, Boston, MA  02110-1301  USA


Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this
when it starts in an interactive mode:

    Gnomovision version 69, Copyright (C) year  name of author
    Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
    This is free software, and you are welcome to redistribute it
    under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License.  Of course, the commands you use may
be called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary.  Here is a sample; alter the names:

  Yoyodyne, Inc., hereby disclaims all copyright interest in the program
  `Gnomovision' (which makes passes at compilers) written by James Hacker.

  <signature of Ty Coon>, 1 April 1989
```

```
  Ty Coon, President of Vice

This General Public License does not permit incorporating your program into
proprietary programs.  If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library.  If this is what you want to do, use the GNU Library General
Public License instead of this License.
```

**Additional Freetype Attributions**

```
--------------------------------
The below applies to the following file(s):
libfreetype/src/psaux/psarrst.c
libfreetype/src/psaux/psarrst.h
libfreetype/src/psaux/psblues.c
libfreetype/src/psaux/psblues.h
libfreetype/src/psaux/pserror.c
libfreetype/src/psaux/pserror.h
libfreetype/src/psaux/psfixed.h
libfreetype/src/psaux/psfont.c
libfreetype/src/psaux/psfont.h
libfreetype/src/psaux/psft.c
libfreetype/src/psaux/psft.h
libfreetype/src/psaux/psglue.h
libfreetype/src/psaux/pshints.c
libfreetype/src/psaux/pshints.h
libfreetype/src/psaux/psintrp.c
libfreetype/src/psaux/psintrp.h
libfreetype/src/psaux/psread.c
libfreetype/src/psaux/psread.h
libfreetype/src/psaux/psstack.c
libfreetype/src/psaux/psstack.h
libfreetype/src/psaux/pstypes.h

Copyright (C) 2006-2014 Adobe Systems Incorporated.

This software, and all works of authorship, whether in source or
object code form as indicated by the copyright notice(s) included
herein (collectively, the "Work") is made available, and may only be
used, modified, and distributed under the FreeType Project License,
LICENSE.TXT.  Additionally, subject to the terms and conditions of the
FreeType Project License, each contributor to the Work hereby grants
to any individual or legal entity exercising permissions granted by
the FreeType Project License and this section (hereafter, "You" or
"Your") a perpetual, worldwide, non-exclusive, no-charge,
royalty-free, irrevocable (except as stated in this section) patent
license to make, have made, use, offer to sell, sell, import, and
otherwise transfer the Work, where such license applies only to those
patent claims licensable by such contributor that are necessarily
infringed by their contribution(s) alone or by combination of their
```

```
contribution(s) with the Work to which such contribution(s) was
submitted.  If You institute patent litigation against any entity
(including a cross-claim or counterclaim in a lawsuit) alleging that
the Work or a contribution incorporated within the Work constitutes
direct or contributory patent infringement, then any patent licenses
granted to You under this License for that Work shall terminate as of
the date such litigation is filed.

By using, modifying, or distributing the Work you indicate that you
have read and understood the terms and conditions of the
FreeType Project License as well as those provided in this section,
and you accept them fully.
```

**MIT License**

```
---------------------------------
The below applies to the following file(s):
libfreetype/include/freetype/internal/fthash.h
libfreetype/src/base/fthash.c

Copyright (C) 2000 Computing Research Labs, New Mexico State University
Copyright (C) 2001-2015

  Francesco Zappa Nardelli

Permission is hereby granted, free of charge, to any person obtaining a
copy of this software and associated documentation files (the "Software"),
to deal in the Software without restriction, including without limitation
the rights to use, copy, modify, merge, publish, distribute, sublicense,
and/or sell copies of the Software, and to permit persons to whom the
Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in
all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL
THE COMPUTING RESEARCH LAB OR NEW MEXICO STATE UNIVERSITY BE LIABLE FOR ANY
CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT
OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR
THE USE OR OTHER DEALINGS IN THE SOFTWARE.
```

## libpng v1.6.54

**libpng License**

```
COPYRIGHT NOTICE, DISCLAIMER, and LICENSE
=========================================

PNG Reference Library License version 2
---------------------------------------

Copyright (C) 1995-2026 The PNG Reference Library Authors.
Copyright (C) 2018-2026 Cosmin Truta
Copyright (C) 1998-2018 Glenn Randers-Pehrson
Copyright (C) 1996-1997 Andreas Dilger
Copyright (C) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

The software is supplied "as is", without warranty of any kind,
express or implied, including, without limitation, the warranties
of merchantability, fitness for a particular purpose, title, and
non-infringement.  In no event shall the Copyright owners, or
anyone distributing the software, be liable for any damages or
other liability, whether in contract, tort or otherwise, arising
from, out of, or in connection with the software, or the use or
other dealings in the software, even if advised of the possibility
of such damage.

Permission is hereby granted to use, copy, modify, and distribute
this software, or portions hereof, for any purpose, without fee,
subject to the following restrictions:

 1. The origin of this software must not be misrepresented; you
    must not claim that you wrote the original software.  If you
    use this software in a product, an acknowledgment in the product
    documentation would be appreciated, but is not required.

 2. Altered source versions must be plainly marked as such, and must
    not be misrepresented as being the original software.

 3. This Copyright notice may not be removed or altered from any
    source or altered source distribution.


PNG Reference Library License version 1 (for libpng 0.5 through 1.6.35)
-----------------------------------------------------------------------

libpng versions 1.0.7, July 1, 2000, through 1.6.35, July 15, 2018 are
Copyright (c) 2000-2002, 2004, 2006-2018 Glenn Randers-Pehrson, are
derived from libpng-1.0.6, and are distributed according to the same
disclaimer and license as libpng-1.0.6 with the following individuals
added to the list of Contributing Authors:

    Simon-Pierre Cadieux
    Eric S. Raymond
```

```
    Mans Rullgard
    Cosmin Truta
    Gilles Vollant
    James Yu
    Mandar Sahastrabuddhe
    Google Inc.
    Vadim Barkov

and with the following additions to the disclaimer:

    There is no warranty against interference with your enjoyment of
    the library or against infringement.  There is no warranty that our
    efforts or the library will fulfill any of your particular purposes
    or needs.  This library is provided with all faults, and the entire
    risk of satisfactory quality, performance, accuracy, and effort is
    with the user.

Some files in the "contrib" directory and some configure-generated
files that are distributed with libpng have other copyright owners, and
are released under other open source licenses.

libpng versions 0.97, January 1998, through 1.0.6, March 20, 2000, are
Copyright (c) 1998-2000 Glenn Randers-Pehrson, are derived from
libpng-0.96, and are distributed according to the same disclaimer and
license as libpng-0.96, with the following individuals added to the
list of Contributing Authors:

    Tom Lane
    Glenn Randers-Pehrson
    Willem van Schaik

libpng versions 0.89, June 1996, through 0.96, May 1997, are
Copyright (c) 1996-1997 Andreas Dilger, are derived from libpng-0.88,
and are distributed according to the same disclaimer and license as
libpng-0.88, with the following individuals added to the list of
Contributing Authors:

    John Bowler
    Kevin Bracey
    Sam Bushell
    Magnus Holmgren
    Greg Roelofs
    Tom Tanner

Some files in the "scripts" directory have other copyright owners,
but are released under this license.

libpng versions 0.5, May 1995, through 0.88, January 1996, are
Copyright (c) 1995-1996 Guy Eric Schalnat, Group 42, Inc.

For the purposes of this copyright and license, "Contributing Authors"
```

```
is defined as the following set of individuals:

    Andreas Dilger
    Dave Martindale
    Guy Eric Schalnat
    Paul Schmidt
    Tim Wegner

The PNG Reference Library is supplied "AS IS".  The Contributing
Authors and Group 42, Inc. disclaim all warranties, expressed or
implied, including, without limitation, the warranties of
merchantability and of fitness for any purpose.  The Contributing
Authors and Group 42, Inc. assume no liability for direct, indirect,
incidental, special, exemplary, or consequential damages, which may
result from the use of the PNG Reference Library, even if advised of
the possibility of such damage.

Permission is hereby granted to use, copy, modify, and distribute this
source code, or portions hereof, for any purpose, without fee, subject
to the following restrictions:

 1. The origin of this source code must not be misrepresented.

 2. Altered versions must be plainly marked as such and must not
    be misrepresented as being the original source.

 3. This Copyright notice may not be removed or altered from any
    source or altered source distribution.

The Contributing Authors and Group 42, Inc. specifically permit,
without fee, and encourage the use of this source code as a component
to supporting the PNG file format in commercial products.  If you use
this source code in a product, acknowledgment is not required but would
be appreciated.

TRADEMARK
=========

The name "libpng" has not been registered by the Copyright owners
as a trademark in any jurisdiction.  However, because libpng has
been distributed and maintained world-wide, continually since 1995,
the Copyright owners claim "common-law trademark protection" in any
jurisdiction where common-law trademark is recognized.
```

**AUTHORS File Information**

```
PNG REFERENCE LIBRARY AUTHORS
=============================

This is the list of PNG Reference Library ("libpng") Contributing
```

```
Authors, for copyright and licensing purposes.

 * Adam Richter
 * Alexander Smorkalov
 * Andreas Dilger
 * Chris Blume
 * Cosmin Truta
 * Dave Martindale
 * Eric S. Raymond
 * Gilles Vollant
 * Glenn Randers-Pehrson
 * Greg Roelofs
 * Guy Eric Schalnat
 * James Yu
 * John Bowler
 * Kevin Bracey
 * Lucas Chollet
 * Magnus Holmgren
 * Mandar Sahastrabuddhe
 * Manfred Schlaegl
 * Mans Rullgard
 * Matt Sarett
 * Mike Klein
 * Pascal Massimino
 * Paul Schmidt
 * Petr Simecek
 * Philippe Antoine
 * Qiang Zhou
 * Sam Bushell
 * Samuel Williams
 * Simon-Pierre Cadieux
 * Tim Wegner
 * Tobias Stoeckmann
 * Tom Lane
 * Tom Tanner
 * Vadim Barkov
 * Willem van Schaik
 * Zhijie Liang
 * Apple Inc.
    - Zixu Wang (□□□)
 * Arm Holdings
    - Richard Townsend
 * Google LLC
    - Dan Field
    - Drago□ Tiselice
    - Leon Scroggins III
    - Matt Sarett
    - Mike Klein
    - Sami Boukortt
    - Wan-Teh Chang
 * Loongson Technology Corporation Ltd.
```

```
    - GuXiWei (□□□)
    - JinBo (□□)
    - ZhangLixia (□□□)
 * Samsung Group
    - Filip Wasil
 * SpacemiT Hangzhou Technology, Co.
    - Liang Junzhao (□□□)

The build projects, the build scripts, the test scripts, and other
files in the "projects", "scripts" and "tests" directories, have
other copyright owners, but are released under the libpng license.

Some files in the "ci" and "contrib" directories, as well as some
of the tools-generated files that are distributed with libpng, have
other copyright owners, and are released under other open source
licenses.
```

## xwd v1.0.7

### xwd utility

```
This is the copyright for the files in src/java.desktop/unix/native/libawt_xawt:
list.h, multiVis.h, wsutils.h, list.c, multiVis.c

Copyright 1994 Hewlett-Packard Co.
Copyright 1996, 1998  The Open Group

Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted without fee, provided that
the above copyright notice appear in all copies and that both that
copyright notice and this permission notice appear in supporting
documentation.

The above copyright notice and this permission notice shall be included
in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.
IN NO EVENT SHALL THE OPEN GROUP BE LIABLE FOR ANY CLAIM, DAMAGES OR
OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE SOFTWARE.

Except as contained in this notice, the name of The Open Group shall
not be used in advertising or otherwise to promote the sale, use or
other dealings in this Software without prior written authorization
```

```
from The Open Group.
```

# Module java.smartcardio

## PC/SC Lite v1.9.9

### PC/SC Lite Notice

```
MUSCLE SmartCard Development ( https://pcsclite.apdu.fr/ )

Only 3 header files are included in this distribution: winscard.h, wintypes.h,
pcsclite.h

Copyright for winscard.h:
 * Copyright (C) 1999-2003
 *  David Corcoran <corcoran@musclecard.com>
 * Copyright (C) 2002-2009
 *  Ludovic Rousseau <ludovic.rousseau@free.fr>

Copyright for wintypes.h:
 * Copyright (C) 1999
 *  David Corcoran <corcoran@musclecard.com>
 * Copyright (C) 2002-2011
 *  Ludovic Rousseau <ludovic.rousseau@free.fr>

Copyright for pcsclite.h:
 * Copyright (C) 1999-2004
 *  David Corcoran <corcoran@musclecard.com>
 * Copyright (C) 2002-2011
 *  Ludovic Rousseau <ludovic.rousseau@free.fr>
 * Copyright (C) 2005
 *  Martin Paljak <martin@paljak.pri.ee>
```

### PC/SC Lite License

```
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions
are met:

1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright
   notice, this list of conditions and the following disclaimer in the
   documentation and/or other materials provided with the distribution.
3. The name of the author may not be used to endorse or promote products
   derived from this software without specific prior written permission.
```

```
THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY EXPRESS OR
IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES
OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.
IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF
THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

# Module java.xml

## Apache Commons Byte Code Engineering Library (BCEL) Version 6.7.0

### Apache Commons BCEL Notice

```
    Apache Commons BCEL
    Copyright 2004-2022 The Apache Software Foundation

    This product includes software developed at
    The Apache Software Foundation (https://www.apache.org/).
```

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
```

```
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.
```

```
3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.
```

```
   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
```

```
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
```

## Apache Xalan v2.7.2

### Apache Xalan Notice

```
=========================================================================================
    ==  NOTICE file corresponding to the section 4d of the Apache License, Version
2.0, ==
    ==  in this case for the Apache Xalan distribution.
==

=========================================================================================

   This product includes software developed by
   The Apache Software Foundation (http://www.apache.org/).

   Specifically, we only include the XSLTC portion of the source from the Xalan
distribution.
   The Xalan project has two processors: an interpretive one (Xalan Interpretive) and
```

```
a
   compiled one (The XSLT Compiler (XSLTC)). We *only* use the XSLTC part of Xalan; We
use
   the source from the packages that are part of the XSLTC sources.

   Portions of this software was originally based on the following:

     - software copyright (c) 1999-2002, Lotus Development Corporation.,
http://www.lotus.com.
     - software copyright (c) 2001-2002, Sun Microsystems., http://www.sun.com.
     - software copyright (c) 2003, IBM Corporation., http://www.ibm.com.
     - voluntary contributions made by Ovidiu Predescu (ovidiu@cup.hp.com) on behalf
of the
       Apache Software Foundation and was originally developed at Hewlett Packard
Company.
```

**Apache 2.0 License**

```
                              Apache License
                        Version 2.0, January 2004
                     http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
```

```
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
```

```
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
```

```
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
```

```
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.


JLEX COPYRIGHT NOTICE, LICENSE AND DISCLAIMER.
Copyright 1996-2003 by Elliot Joel Berk and C. Scott Ananian
Permission to use, copy, modify, and distribute this software and
its documentation for any purpose and without fee is hereby granted,
provided that the above copyright notice appear in all copies and that
both the copyright notice and this permission notice and warranty
disclaimer appear in supporting documentation, and that the name of
the authors or their employers not be used in advertising or publicity
pertaining to distribution of the software without specific, written
prior permission.
The authors and their employers disclaim all warranties with regard to
this software, including all implied warranties of merchantability and
fitness. In no event shall the authors or their employers be liable for
any special, indirect or consequential damages or any damages whatsoever
resulting from loss of use, data or profits, whether in an action of
contract, negligence or other tortious action, arising out of or in
connection with the use or performance of this software.The portions of
JLex output which are hard-coded into the JLex source code are (naturally)
covered by this same license.
```

## Apache Xerces v2.12.2

### Apache Xerces Notice

```
    ========================================================================
    == NOTICE file corresponding to section 4(d) of the Apache License,    ==
    == Version 2.0, in this case for the Apache Xerces Java distribution.  ==
    ========================================================================

    Apache Xerces Java
```

```
    Copyright 1999-2022 The Apache Software Foundation

    This product includes software developed at
    The Apache Software Foundation (http://www.apache.org/).

    Portions of this software were originally based on the following:
    - software copyright (c) 1999, IBM Corporation., http://www.ibm.com.
    - software copyright (c) 1999, Sun Microsystems., http://www.sun.com.
    - voluntary contributions made by Paul Eng on behalf of the
    Apache Software Foundation that were originally developed at iClick, Inc.,
    software copyright (c) 1999.
```

**Apache 2.0 License**

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
```

```
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.
```

```
4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
```

```
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]
```

```
Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
```

## CUP Parser Generator for Java v 0.11b

### CUP Parser Generator License

```
Copyright 1996-2015 by Scott Hudson, Frank Flannery, C. Scott Ananian, Michael Petter

Permission to use, copy, modify, and distribute this software and its
documentation for any purpose and without fee is hereby granted, provided
that the above copyright notice appear in all copies and that both
the copyright notice and this permission notice and warranty disclaimer
appear in supporting documentation, and that the names of the authors or
their employers not be used in advertising or publicity pertaining to
distribution of the software without specific, written prior permission.

The authors and their employers disclaim all warranties with regard to
this software, including all implied warranties of merchantability and
fitness. In no event shall the authors or their employers be liable for
any special, indirect or consequential damages or any damages whatsoever
resulting from loss of use, data or profits, whether in an action of
contract, negligence or other tortious action, arising out of or in
connection with the use or performance of this software.
```

```
This is an open source license. It is also GPL-Compatible (see entry for
"Standard ML of New Jersey"). The portions of CUP output which are hard-coded
into the CUP source code are (naturally) covered by this same license, as is
the CUP runtime code linked with the generated parser.
```

## DOM Level 3 Core Specification v1.0

### W3C Software Notice

```
Copyright © 2004 World Wide Web Consortium, (Massachusetts Institute of Technology,
European Research Consortium for Informatics and Mathematics, Keio University).
All Rights Reserved.

The DOM bindings are published under the W3C Software Copyright Notice and License.
The software license requires "Notice of any changes or modifications to the W3C
files, including the date changes were made." Consequently, modified versions of
the DOM bindings must document that they do not conform to the W3C standard; in the
case of the IDL definitions, the pragma prefix can no longer be 'w3c.org'; in the
case of the Java language binding, the package names can no longer be in the
'org.w3c' package.
```

### W3C License

```
W3C SOFTWARE NOTICE AND LICENSE

http://www.w3.org/Consortium/Legal/2002/copyright-software-20021231

This work (and included software, documentation such as READMEs, or other
related items) is being provided by the copyright holders under the following
license. By obtaining, using and/or copying this work, you (the licensee)
agree that you have read, understood, and will comply with the following terms
and conditions.

Permission to copy, modify, and distribute this software and its
documentation, with or without modification, for any purpose and without fee
or royalty is hereby granted, provided that you include the following on ALL
copies of the software and documentation or portions thereof, including
modifications:

   1.The full text of this NOTICE in a location viewable to users of the
   redistributed or derivative work.

   2.Any pre-existing intellectual property disclaimers, notices, or terms and
   conditions. If none exist, the W3C Software Short Notice should be included
   (hypertext is preferred, text is permitted) within the body of any
   redistributed or derivative code.

   3.Notice of any changes or modifications to the files, including the date
   changes were made. (We recommend you provide URIs to the location from
   which the code is derived.)

THIS SOFTWARE AND DOCUMENTATION IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS
MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT
LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR
```

```
PURPOSE OR THAT THE USE OF THE SOFTWARE OR DOCUMENTATION WILL NOT INFRINGE ANY
THIRD PARTY PATENTS,COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS.

COPYRIGHT HOLDERS WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL
OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY USE OF THE SOFTWARE OR
DOCUMENTATION.  The name and trademarks of copyright holders may NOT be used
in advertising or publicity pertaining to the software without specific,
written prior permission. Title to copyright in this software and any
associated documentation will at all times remain with copyright holders.


----------------------------------

This formulation of W3C's notice and license became active on December 31
2002. This version removes the copyright ownership notice such that this
license can be used with materials other than those owned by the W3C, reflects
that ERCIM is now a host of the W3C, includes references to this specific
dated version of the license, and removes the ambiguous grant of "use".
Otherwise, this version is the same as the previous version and is written so
as to preserve the Free Software Foundation's assessment of GPL compatibility
and OSI's certification under the Open Source Definition. Please see our
Copyright FAQ for common questions about using materials from our site,
including specific terms and conditions for packages like libwww, Amaya, and
Jigsaw. Other questions about this notice can be directed to
site-policy@w3.org.
```

# Module java.xml.crypto

## Apache Santuario v3.0.5

### Apache 2.0 License

```
                                 Apache License
                           Version 2.0, January 2004
                        http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

   "License" shall mean the terms and conditions for use, reproduction,
   and distribution as defined by Sections 1 through 9 of this document.

   "Licensor" shall mean the copyright owner or entity authorized by
   the copyright owner that is granting the License.

   "Legal Entity" shall mean the union of the acting entity and all
   other entities that control, are controlled by, or are under common
```

```
   control with that entity. For the purposes of this definition,
   "control" means (i) the power, direct or indirect, to cause the
   direction or management of such entity, whether by contract or
   otherwise, or (ii) ownership of fifty percent (50%) or more of the
   outstanding shares, or (iii) beneficial ownership of such entity.

   "You" (or "Your") shall mean an individual or Legal Entity
   exercising permissions granted by this License.

   "Source" form shall mean the preferred form for making modifications,
   including but not limited to software source code, documentation
   source, and configuration files.

   "Object" form shall mean any form resulting from mechanical
   transformation or translation of a Source form, including but
   not limited to compiled object code, generated documentation,
   and conversions to other media types.

   "Work" shall mean the work of authorship, whether in Source or
   Object form, made available under the License, as indicated by a
   copyright notice that is included in or attached to the work
   (an example is provided in the Appendix below).

   "Derivative Works" shall mean any work, whether in Source or Object
   form, that is based on (or derived from) the Work and for which the
   editorial revisions, annotations, elaborations, or other modifications
   represent, as a whole, an original work of authorship. For the purposes
   of this License, Derivative Works shall not include works that remain
   separable from, or merely link (or bind by name) to the interfaces of,
   the Work and Derivative Works thereof.

   "Contribution" shall mean any work of authorship, including
   the original version of the Work and any modifications or additions
   to that Work or Derivative Works thereof, that is intentionally
   submitted to Licensor for inclusion in the Work by the copyright owner
   or by an individual or Legal Entity authorized to submit on behalf of
   the copyright owner. For the purposes of this definition, "submitted"
   means any form of electronic, verbal, or written communication sent
   to the Licensor or its representatives, including but not limited to
   communication on electronic mailing lists, source code control systems,
   and issue tracking systems that are managed by, or on behalf of, the
   Licensor for the purpose of discussing and improving the Work, but
   excluding communication that is conspicuously marked or otherwise
   designated in writing by the copyright owner as "Not a Contribution."

   "Contributor" shall mean Licensor and any individual or Legal Entity
   on behalf of whom a Contribution has been received by Licensor and
   subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
```

```
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   copyright license to reproduce, prepare Derivative Works of,
   publicly display, publicly perform, sublicense, and distribute the
   Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of
   this License, each Contributor hereby grants to You a perpetual,
   worldwide, non-exclusive, no-charge, royalty-free, irrevocable
   (except as stated in this section) patent license to make, have made,
   use, offer to sell, sell, import, and otherwise transfer the Work,
   where such license applies only to those patent claims licensable
   by such Contributor that are necessarily infringed by their
   Contribution(s) alone or by combination of their Contribution(s)
   with the Work to which such Contribution(s) was submitted. If You
   institute patent litigation against any entity (including a
   cross-claim or counterclaim in a lawsuit) alleging that the Work
   or a Contribution incorporated within the Work constitutes direct
   or contributory patent infringement, then any patent licenses
   granted to You under this License for that Work shall terminate
   as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the
   Work or Derivative Works thereof in any medium, with or without
   modifications, and in Source or Object form, provided that You
   meet the following conditions:

   (a) You must give any other recipients of the Work or
       Derivative Works a copy of this License; and

   (b) You must cause any modified files to carry prominent notices
       stating that You changed the files; and

   (c) You must retain, in the Source form of any Derivative Works
       that You distribute, all copyright, patent, trademark, and
       attribution notices from the Source form of the Work,
       excluding those notices that do not pertain to any part of
       the Derivative Works; and

   (d) If the Work includes a "NOTICE" text file as part of its
       distribution, then any Derivative Works that You distribute must
       include a readable copy of the attribution notices contained
       within such NOTICE file, excluding those notices that do not
       pertain to any part of the Derivative Works, in at least one
       of the following places: within a NOTICE text file distributed
       as part of the Derivative Works; within the Source form or
       documentation, if provided along with the Derivative Works; or,
       within a display generated by the Derivative Works, if and
       wherever such third-party notices normally appear. The contents
       of the NOTICE file are for informational purposes only and
       do not modify the License. You may add Your own attribution
       notices within Derivative Works that You distribute, alongside
```

```
       or as an addendum to the NOTICE text from the Work, provided
       that such additional attribution notices cannot be construed
       as modifying the License.

   You may add Your own copyright statement to Your modifications and
   may provide additional or different license terms and conditions
   for use, reproduction, or distribution of Your modifications, or
   for any such Derivative Works as a whole, provided Your use,
   reproduction, and distribution of the Work otherwise complies with
   the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,
   any Contribution intentionally submitted for inclusion in the Work
   by You to the Licensor shall be under the terms and conditions of
   this License, without any additional terms or conditions.
   Notwithstanding the above, nothing herein shall supersede or modify
   the terms of any separate license agreement you may have executed
   with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade
   names, trademarks, service marks, or product names of the Licensor,
   except as required for reasonable and customary use in describing the
   origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or
   agreed to in writing, Licensor provides the Work (and each
   Contributor provides its Contributions) on an "AS IS" BASIS,
   WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or
   implied, including, without limitation, any warranties or conditions
   of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
   PARTICULAR PURPOSE. You are solely responsible for determining the
   appropriateness of using or redistributing the Work and assume any
   risks associated with Your exercise of permissions under this License.

8. Limitation of Liability. In no event and under no legal theory,
   whether in tort (including negligence), contract, or otherwise,
   unless required by applicable law (such as deliberate and grossly
   negligent acts) or agreed to in writing, shall any Contributor be
   liable to You for damages, including any direct, indirect, special,
   incidental, or consequential damages of any character arising as a
   result of this License or out of the use or inability to use the
   Work (including but not limited to damages for loss of goodwill,
   work stoppage, computer failure or malfunction, or any and all
   other commercial damages or losses), even if such Contributor
   has been advised of the possibility of such damages.

9. Accepting Warranty or Additional Liability. While redistributing
   the Work or Derivative Works thereof, You may choose to offer,
   and charge a fee for, acceptance of support, warranty, indemnity,
   or other liability obligations and/or rights consistent with this
   License. However, in accepting such obligations, You may act only
```

```
   on Your own behalf and on Your sole responsibility, not on behalf
   of any other Contributor, and only if You agree to indemnify,
   defend, and hold each Contributor harmless for any liability
   incurred by, or claims asserted against, such Contributor by reason
   of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following
   boilerplate notice, with the fields enclosed by brackets "[]"
   replaced with your own identifying information. (Don't include
   the brackets!)  The text should be enclosed in the appropriate
   comment syntax for the file format. We also recommend that a
   file or class name and description of purpose be included on the
   same "printed page" as the copyright notice for easier
   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");
you may not use this file except in compliance with the License.
You may obtain a copy of the License at

    http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software
distributed under the License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
See the License for the specific language governing permissions and
limitations under the License.
```

**Apache Santuario Notice**

```
Apache Santuario - XML Security for Java
Copyright 1999-2024 The Apache Software Foundation

This product includes software developed at
The Apache Software Foundation (http://www.apache.org/).

It was originally based on software copyright (c) 2001, Institute for
Data Communications Systems, <http://www.nue.et-inf.uni-siegen.de/>.

The development of this software was partly funded by the European
Commission in the <WebSig> project in the ISIS Programme.

This product contains software that is
copyright (c) 2021, 2023, Oracle and/or its affiliates.
```

# Module jdk.crypto.cryptoki

## IAIK (Institute for Applied Information Processing and Communication) PKCS#11 wrapper files v1

### IAIK License

```
Copyright (c) 2002 Graz University of Technology. All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this
   list of conditions and the following disclaimer.

2. Redistributions in binary form must reproduce the above copyright notice,
   this list of conditions and the following disclaimer in the documentation
   and/or other materials provided with the distribution.

3. The end-user documentation included with the redistribution, if any, must
   include the following acknowledgment:

   "This product includes software developed by IAIK of Graz University of
    Technology."

   Alternately, this acknowledgment may appear in the software itself, if and
   wherever such third-party acknowledgments normally appear.

4. The names "Graz University of Technology" and "IAIK of Graz University of
   Technology" must not be used to endorse or promote products derived from this
   software without prior written permission.

5. Products derived from this software may not be called "IAIK PKCS Wrapper",
   nor may "IAIK" appear in their name, without prior written permission of
   Graz University of Technology.

THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES,
INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND
FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE
LICENSOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.
```

## OASIS PKCS #11 Cryptographic Token Interface v3.1

### OASIS PKCS #11 Cryptographic Token Interface License


```
Copyright © OASIS Open 2023. All Rights Reserved.

All capitalized terms in the following text have the meanings
assigned to them in the OASIS Intellectual Property Rights Policy (the
"OASIS IPR Policy"). The full Policy may be found at the OASIS website:
[https://www.oasis-open.org/policies-guidelines/ipr/].

This document and translations of it may be copied and furnished to
others, and derivative works that comment on or otherwise explain it or
assist in its implementation may be prepared, copied, published, and
distributed, in whole or in part, without restriction of any kind,
provided that the above copyright notice and this section are included
on all such copies and derivative works. However, this document itself
may not be modified in any way, including by removing the copyright
notice or references to OASIS, except as needed for the purpose of
developing any document or deliverable produced by an OASIS Technical
Committee (in which case the rules applicable to copyrights, as set
forth in the OASIS IPR Policy, must be followed) or as required to
translate it into languages other than English.

The limited permissions granted above are perpetual and will not be
revoked by OASIS or its successors or assigns.

This document and the information contained herein is provided on an
"AS IS" basis and OASIS DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED,
INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE
INFORMATION HEREIN WILL NOT INFRINGE ANY OWNERSHIP RIGHTS OR ANY IMPLIED
WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. OASIS
AND ITS MEMBERS WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR
CONSEQUENTIAL DAMAGES ARISING OUT OF ANY USE OF THIS DOCUMENT OR ANY
PART THEREOF.

As stated in the OASIS IPR Policy, the following three paragraphs in
brackets apply to OASIS Standards Final Deliverable documents (Committee
Specifications, OASIS Standards, or Approved Errata).

[OASIS requests that any OASIS Party or any other party that
believes it has patent claims that would necessarily be infringed by
implementations of this OASIS Standards Final Deliverable, to notify
OASIS TC Administrator and provide an indication of its willingness to
grant patent licenses to such patent claims in a manner consistent with
the IPR Mode of the OASIS Technical Committee that produced this
deliverable.]

[OASIS invites any party to contact the OASIS TC Administrator if it
```

```
is aware of a claim of ownership of any patent claims that would
necessarily be infringed by implementations of this OASIS Standards
Final Deliverable by a patent holder that is not willing to provide a
license to such patent claims in a manner consistent with the IPR Mode
of the OASIS Technical Committee that produced this OASIS Standards
Final Deliverable. OASIS may include such claims on its website, but
disclaims any obligation to do so.]

[OASIS takes no position regarding the validity or scope of any
intellectual property or other rights that might be claimed to pertain
to the implementation or use of the technology described in this OASIS
Standards Final Deliverable or the extent to which any license under
such rights might or might not be available; neither does it represent
that it has made any effort to identify any such rights. Information on
OASIS' procedures with respect to rights in any document or deliverable
produced by an OASIS Technical Committee can be found on the OASIS
website. Copies of claims of rights made available for publication and
any assurances of licenses to be made available, or the result of an
attempt made to obtain a general license or permission for the use of
such proprietary rights by implementers or users of this OASIS Standards
Final Deliverable, can be obtained from the OASIS TC Administrator.
OASIS makes no representation that any information or list of
intellectual property rights will at any time be complete, or that any
claims in such list are, in fact, Essential Claims.]
```

# Module jdk.dynalink

## Dynalink v.5

### Dynalink License

```
Copyright (c) 2009-2013, Attila Szegedi

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:
* Redistributions of source code must retain the above copyright
  notice, this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright
  notice, this list of conditions and the following disclaimer in the
  documentation and/or other materials provided with the distribution.
* Neither the name of the copyright holder nor the names of
  contributors may be used to endorse or promote products derived from
  this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS
IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED
```

```
TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL COPYRIGHT HOLDER
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY,
WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF
ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
```

# Module jdk.hsdis

## Capstone disassembly framework v4.0.2

### Capstone License

```
This is the software license for Capstone disassembly framework.
Capstone has been designed & implemented by Nguyen Anh Quynh &lt;aquynh@gmail.com&gt;

See http://www.capstone-engine.org for further information.

Copyright (c) 2013, COSEINC.
All rights reserved.

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:

* Redistributions of source code must retain the above copyright notice,
  this list of conditions and the following disclaimer.
* Redistributions in binary form must reproduce the above copyright notice,
  this list of conditions and the following disclaimer in the documentation
  and/or other materials provided with the distribution.
* Neither the name of the developer(s) nor the names of its
  contributors may be used to endorse or promote products derived from this
  software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"
AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE
LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR
CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS
INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN
CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE
POSSIBILITY OF SUCH DAMAGE.
```

```
==============================================================================
LLVM Release License
==============================================================================
University of Illinois/NCSA
Open Source License

Copyright (c) 2003-2013 University of Illinois at Urbana-Champaign.
All rights reserved.

Developed by:

    LLVM Team

    University of Illinois at Urbana-Champaign

    http://llvm.org

Permission is hereby granted, free of charge, to any person obtaining a copy of
this software and associated documentation files (the "Software"), to deal with
the Software without restriction, including without limitation the rights to
use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies
of the Software, and to permit persons to whom the Software is furnished to do
so, subject to the following conditions:

    * Redistributions of source code must retain the above copyright notice,
      this list of conditions and the following disclaimers.

    * Redistributions in binary form must reproduce the above copyright notice,
      this list of conditions and the following disclaimers in the
      documentation and/or other materials provided with the distribution.

    * Neither the names of the LLVM Team, University of Illinois at
      Urbana-Champaign, nor the names of its contributors may be used to
      endorse or promote products derived from this Software without specific
      prior written permission.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS
FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT.  IN NO EVENT SHALL THE
CONTRIBUTORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS WITH THE
SOFTWARE.

==============================================================================
Copyrights and Licenses for Third Party Software Distributed with LLVM:
==============================================================================
The LLVM software contains code written by third parties.  Such software will
have its own individual LICENSE.TXT file in the directory in which it appears.
This file will describe the copyrights, license, and restrictions which apply
```

```
to that code.

The disclaimer of warranty in the University of Illinois Open Source License
applies to all code in the LLVM Distribution, and nothing in any of the
other licenses gives permission to use the names of the LLVM Team or the
University of Illinois to endorse or promote products derived from this
Software.

The following pieces of software have additional or alternate copyrights,
licenses, and/or restrictions:

Program             Directory
-------             ---------
Autoconf            llvm/autoconf
                    llvm/projects/ModuleMaker/autoconf
                    llvm/projects/sample/autoconf
Google Test         llvm/utils/unittest/googletest
OpenBSD regex       llvm/lib/Support/{reg*, COPYRIGHT.regex}
pyyaml tests        llvm/test/YAMLParser/{*.data, LICENSE.TXT}
ARM contributions   llvm/lib/Target/ARM/LICENSE.TXT
md5 contributions   llvm/lib/Support/MD5.cpp llvm/include/llvm/Support/MD5.h

==============================================================================

The zulu-hsdis module includes only ARM contributions.
Thus, we include the license notice from the llvm/lib/Target/ARM/LICENSE.TXT license
file below.

------------------------------------------------------------------------------

ARM Limited

Software Grant License Agreement ("Agreement")

Except for the license granted herein to you, ARM Limited ("ARM") reserves all
right, title, and interest in and to the Software (defined below).

Definition

"Software" means the code and documentation as well as any original work of
authorship, including any modifications or additions to an existing work, that
is intentionally submitted by ARM to llvm.org (http://llvm.org) ("LLVM") for
inclusion in, or documentation of, any of the products owned or managed by LLVM
(the "Work"). For the purposes of this definition, "submitted" means any form of
electronic, verbal, or written communication sent to LLVM or its
representatives, including but not limited to communication on electronic
mailing lists, source code control systems, and issue tracking systems that are
managed by, or on behalf of, LLVM for the purpose of discussing and improving
the Work, but excluding communication that is conspicuously marked otherwise.

1. Grant of Copyright License. Subject to the terms and conditions of this
```

```
   Agreement, ARM hereby grants to you and to recipients of the Software
   distributed by LLVM a perpetual, worldwide, non-exclusive, no-charge,
   royalty-free, irrevocable copyright license to reproduce, prepare derivative
   works of, publicly display, publicly perform, sublicense, and distribute the
   Software and such derivative works.

2. Grant of Patent License. Subject to the terms and conditions of this
   Agreement, ARM hereby grants you and to recipients of the Software
   distributed by LLVM a perpetual, worldwide, non-exclusive, no-charge,
   royalty-free, irrevocable (except as stated in this section) patent license
   to make, have made, use, offer to sell, sell, import, and otherwise transfer
   the Work, where such license applies only to those patent claims licensable
   by ARM that are necessarily infringed by ARM's Software alone or by
   combination of the Software with the Work to which such Software was
   submitted. If any entity institutes patent litigation against ARM or any
   other entity (including a cross-claim or counterclaim in a lawsuit) alleging
   that ARM's Software, or the Work to which ARM has contributed constitutes
   direct or contributory patent infringement, then any patent licenses granted
   to that entity under this Agreement for the Software or Work shall terminate
   as of the date such litigation is filed.

Unless required by applicable law or agreed to in writing, the software is
provided on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND,
either express or implied, including, without limitation, any warranties or
conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A
PARTICULAR PURPOSE.
```

## HotSpot plugin for disassembling dynamically generated code (HSDIS)

### HSDIS License

```
Copyright (c) 2008, 2022, Oracle and/or its affiliates. All rights reserved.
DO NOT ALTER OR REMOVE COPYRIGHT NOTICES OR THIS FILE HEADER.

The Universal Permissive License (UPL), Version 1.0

Subject to the condition set forth below, permission is hereby granted to
any person obtaining a copy of this software, associated documentation
and/or data (collectively the "Software"), free of charge and under any
and all copyright rights in the Software, and any and all patent rights
owned or freely licensable by each licensor hereunder covering either (i)
the unmodified Software as contributed to or provided by such licensor,
or (ii) the Larger Works (as defined below), to deal in both

(a) the Software, and

(b) any piece of software and/or hardware listed in the lrgrwrks.txt file
if one is included with the Software (each a "Larger Work" to which the
```

```
Software is contributed by such licensors),

without restriction, including without limitation the rights to copy,
create derivative works of, display, perform, and distribute the Software
and make, use, sell, offer for sale, import, export, have made, and have
sold the Software and the Larger Work(s), and to sublicense the foregoing
rights on either these or other terms.

This license is subject to the following condition:

The above copyright notice and either this complete permission notice or
at a minimum a reference to the UPL must be included in all copies or
substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN
NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM,
DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR
OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE
USE OR OTHER DEALINGS IN THE SOFTWARE.

Please contact Oracle, 500 Oracle Parkway, Redwood Shores, CA 94065 USA
or visit www.oracle.com if you need additional information or have any
questions.
```

# Module jdk.internal.le

## JLine v3.26.1

### JLine License

```
Copyright (c) 2002-2023, the original author or authors.
All rights reserved.

https://opensource.org/licenses/BSD-3-Clause

Redistribution and use in source and binary forms, with or
without modification, are permitted provided that the following
conditions are met:

Redistributions of source code must retain the above copyright
notice, this list of conditions and the following disclaimer.

Redistributions in binary form must reproduce the above copyright
notice, this list of conditions and the following disclaimer
in the documentation and/or other materials provided with
```

```
the distribution.

Neither the name of JLine nor the names of its contributors
may be used to endorse or promote products derived from this
software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
"AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING,
BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY
AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO
EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE
FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO,
PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED
AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING
IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
OF THE POSSIBILITY OF SUCH DAMAGE.
```

# Module jdk.internal.opt

## jopt-simple v5.0.4

**MIT License**

```
Copyright (c) 2004-2015 Paul R. Holser, Jr.

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS
OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL
THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR
OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE,
ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR
OTHER DEALINGS IN THE SOFTWARE.
```

# Module jdk.javadoc

## jQuery UI v1.14.1

### jQuery UI License

```
Copyright OpenJS Foundation and other contributors, https://openjsf.org/

This software consists of voluntary contributions made by many
individuals. For exact contribution history, see the revision history
available at https://github.com/jquery/jquery-ui

The following license applies to all parts of this software except as
documented below:

====

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

====

Copyright and related rights for sample code are waived via CC0. Sample
code is defined as all source code contained within the demos directory.

CC0: http://creativecommons.org/publicdomain/zero/1.0/

====

All files located in the node_modules and external directories are
externally maintained libraries used by this software which have their
own licenses; we recommend you read them, as their terms may differ from
```

```
the terms above.
```

### jQuery v3.7.1

#### jQuery License

```
jQuery v 3.7.1
Copyright OpenJS Foundation and other contributors, https://openjsf.org/

Permission is hereby granted, free of charge, to any person obtaining
a copy of this software and associated documentation files (the
"Software"), to deal in the Software without restriction, including
without limitation the rights to use, copy, modify, merge, publish,
distribute, sublicense, and/or sell copies of the Software, and to
permit persons to whom the Software is furnished to do so, subject to
the following conditions:

The above copyright notice and this permission notice shall be
included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND,
EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF
MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE
LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION
OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION
WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
```

## Module jdk.localedata

### Thai Dictionary

#### Thai Dictionary License

```
Copyright (C) 1982 The Royal Institute, Thai Royal Government.

Copyright (C) 1998 National Electronics and Computer Technology Center,
National Science and Technology Development Agency,
Ministry of Science Technology and Environment,
Thai Royal Government.

Permission is hereby granted, free of charge, to any person obtaining a copy
of this software and associated documentation files (the "Software"), to deal
in the Software without restriction, including without limitation the rights
```

```
to use, copy, modify, merge, publish, distribute, sublicense, and/or sell
copies of the Software, and to permit persons to whom the Software is
furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all
copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR
IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY,
FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE
AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER
LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM,
OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
```

## Unicode Common Local Data Repository (CLDR) v43

### CLDR License

```
UNICODE, INC. LICENSE AGREEMENT - DATA FILES AND SOFTWARE

See Terms of Use <https://www.unicode.org/copyright.html>
for definitions of Unicode Inc.s Data Files and Software.

NOTICE TO USER: Carefully read the following legal agreement.
BY DOWNLOADING, INSTALLING, COPYING OR OTHERWISE USING UNICODE INC.'S
DATA FILES ("DATA FILES"), AND/OR SOFTWARE ("SOFTWARE"),
YOU UNEQUIVOCALLY ACCEPT, AND AGREE TO BE BOUND BY, ALL OF THE
TERMS AND CONDITIONS OF THIS AGREEMENT.
IF YOU DO NOT AGREE, DO NOT DOWNLOAD, INSTALL, COPY, DISTRIBUTE OR USE
THE DATA FILES OR SOFTWARE.

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1991-2022 Unicode, Inc. All rights reserved.
Distributed under the Terms of Use in https://www.unicode.org/copyright.html.

Permission is hereby granted, free of charge, to any person obtaining
a copy of the Unicode data files and any associated documentation
(the "Data Files") or Unicode software and any associated documentation
(the "Software") to deal in the Data Files or Software
without restriction, including without limitation the rights to use,
copy, modify, merge, publish, distribute, and/or sell copies of
the Data Files or Software, and to permit persons to whom the Data Files
or Software are furnished to do so, provided that either
(a) this copyright and permission notice appear with all copies
of the Data Files or Software, or
(b) this copyright and permission notice appear in associated
```

```
Documentation.

THE DATA FILES AND SOFTWARE ARE PROVIDED "AS IS", WITHOUT WARRANTY OF
ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE
WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND
NONINFRINGEMENT OF THIRD PARTY RIGHTS.
IN NO EVENT SHALL THE COPYRIGHT HOLDER OR HOLDERS INCLUDED IN THIS
NOTICE BE LIABLE FOR ANY CLAIM, OR ANY SPECIAL INDIRECT OR CONSEQUENTIAL
DAMAGES, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE,
DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER
TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE OF THE DATA FILES OR SOFTWARE.

Except as contained in this notice, the name of a copyright holder
shall not be used in advertising or otherwise to promote the sale,
use or other dealings in these Data Files or Software without prior
written authorization of the copyright holder.



------------------------------------------------------------ Terms of Use
---------------------------------------------------------------


    Unicode® Copyright and Terms of Use

    For the general privacy policy governing access to this site, see the  Unicode
Privacy Policy.

        Unicode Copyright
            Copyright © 1991-2023 Unicode, Inc. All rights reserved.
        Definitions

        Unicode Data Files ("DATA FILES") include all data files under the
directories:
        https://www.unicode.org/Public/
        https://www.unicode.org/reports/
        https://www.unicode.org/ivd/data/

        Unicode Data Files do not include PDF online code charts under the directory:
        https://www.unicode.org/Public/

        Unicode Software ("SOFTWARE") includes any source code published in the
Unicode Standard
        or any source code or compiled code under the directories:
        https://www.unicode.org/Public/PROGRAMS/
        https://www.unicode.org/Public/cldr/
        http://site.icu-project.org/download/

        Terms of Use
            Certain documents and files on this website contain a legend indicating
```

that "Modification is permitted." Any person is hereby authorized, without fee, to modify such documents and files to create derivative works conforming to the Unicode® Standard, subject to Terms and Conditions herein.

Any person is hereby authorized, without fee, to view, use, reproduce, and distribute all documents and files, subject to the Terms and Conditions herein.

Further specifications of rights and restrictions pertaining to the use of the Unicode DATA FILES and SOFTWARE can be found in the Unicode Data Files and Software License.

Each version of the Unicode Standard has further specifications of rights and restrictions of use. For the book editions (Unicode 5.0 and earlier), these are found on the back of the title page.

The Unicode PDF online code charts carry specific restrictions. Those restrictions are incorporated as the first page of each PDF code chart.

All other files, including online documentation of the core specification for Unicode 6.0 and later, are covered under these general Terms of Use.

No license is granted to "mirror" the Unicode website where a fee is charged for access to the "mirror" site.

Modification is not permitted with respect to this document. All copies of this document must be verbatim.

Restricted Rights Legend

Any technical data or software which is licensed to the United States of America, its agencies and/or instrumentalities under this Agreement is commercial technical data or commercial computer software developed exclusively at private expense as defined in FAR 2.101, or DFARS 252.227-7014 (June 1995), as applicable. For technical data, use, duplication, or disclosure by the Government is subject to restrictions as set forth in DFARS 202.227-7015 Technical Data, Commercial and Items (Nov 1995) and this Agreement. For Software, in accordance with FAR 12-212 or DFARS 227-7202, as applicable, use, duplication or disclosure by the Government is subject to the restrictions set forth in this Agreement.

Warranties and Disclaimers

This publication and/or website may include technical or typographical errors or other inaccuracies. Changes are periodically added to the information herein; these changes will be incorporated in new editions of the publication and/or website. Unicode, Inc. may make improvements and/or changes in the product(s) and/or program(s) described in this publication and/or website at any time.

If this file has been purchased on magnetic or optical media from Unicode, Inc. the sole and exclusive remedy for any claim will be exchange of the defective media within ninety (90) days of original purchase.

EXCEPT AS PROVIDED IN SECTION E.2, THIS PUBLICATION AND/OR SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND EITHER EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. UNICODE, INC. AND ITS LICENSORS ASSUME NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THIS PUBLICATION AND/OR SOFTWARE OR OTHER DOCUMENTS WHICH ARE REFERENCED BY OR LINKED TO THIS PUBLICATION OR THE UNICODE WEBSITE.

Waiver of Damages

In no event shall Unicode, Inc. or its licensors be liable for any special, incidental, indirect or consequential damages of any kind, or any damages whatsoever, whether or not Unicode, Inc. was advised of the possibility of the damage, including, without limitation, those resulting from the following: loss of use, data or profits, in connection with the use, modification or distribution of this

```
information or its derivatives.
        Trademarks & Logos
            The Unicode Word Mark and the Unicode Logo are trademarks of Unicode, Inc.
"The Unicode Consortium" and "Unicode, Inc." are trade names of Unicode, Inc. Use of
the information and materials found on this website indicates your acknowledgement of
Unicode, Inc.'s exclusive worldwide rights in the Unicode Word Mark, the Unicode Logo,
and the Unicode trade names.
            The Unicode Consortium Name and Trademark Usage Policy ("Trademark Policy")
are incorporated herein by reference and you agree to abide by the provisions of the
Trademark Policy, which may be changed from time to time in the sole discretion of
Unicode, Inc.
            All third party trademarks referenced herein are the property of their
respective owners.
        Miscellaneous
            Jurisdiction and Venue. This website is operated from a location in the
State of California, United States of America. Unicode, Inc. makes no representation
that the materials are appropriate for use in other locations. If you access this
website from other locations, you are responsible for compliance with local laws. This
Agreement, all use of this website and any claims and damages resulting from use of
this website are governed solely by the laws of the State of California without regard
to any principles which would apply the laws of a different jurisdiction. The user
agrees that any disputes regarding this website shall be resolved solely in the courts
located in Santa Clara County, California. The user agrees said courts have personal
jurisdiction and agree to waive any right to transfer the dispute to any other forum.
            Modification by Unicode, Inc. Unicode, Inc. shall have the right to modify
this Agreement at any time by posting it to this website. The user may not assign any
part of this Agreement without Unicode, Inc.'s prior written consent.
            Taxes. The user agrees to pay any taxes arising from access to this
website or use of the information herein, except for those based on Unicode's net
income.
            Severability.  If any provision of this Agreement is declared invalid or
unenforceable, the remaining provisions of this Agreement shall remain in effect.
            Entire Agreement. This Agreement constitutes the entire agreement between
the parties.
```

# Legal Notices

Copyright (c) 2013-2026, Azul Systems, Inc. 385 Moffett Park Drive, Suite 115, Sunnyvale, CA 94089

All rights reserved.

Azul Systems, Azul Zulu, and the Azul logo are trademarks or registered trademarks of Azul Systems, Inc. Java and OpenJDK are trademarks or registered trademarks of Oracle and/or its affiliates. All other trademarks are the property of their respective holders and are used here only for identification purposes.

Azul Zulu includes copies of the third-party notices required by each module, under a subdirectory with the name of the module in the “legal” subdirectory. For example, the third party notices for components used in the java.base module are listed under /legal/java.base.