**OPEN SOURCE SOFTWARE NOTICE**

Please note we provide an open source software notice along with this product and/or this product firmware (in the following just “this product”). The open source software licenses are granted by the respective right holders. And the open source licenses prevail all other license information with regard to the respective open source software contained in the product, including but not limited to End User Software Licensing Agreement. This notice is provided on behalf of Huawei Technologies Co. Ltd. and any of its local subsidiaries which may have provided this product to you in your local country.

**Warranty Disclaimer**

**The open source software in this product 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 applicable licenses for more details.**

**Copyright Notice and License Texts**

Software: flink 1.13.0

**Copyright notice:**

Copyright (c) 2011, Joe Walnes, Aslak Hellesøy and contributors All rights reserved.  
Copyright 2014-2021 The Apache Software Foundation  
Copyright (c) 2012-2019, Javolution (http://javolution.org/)  
Copyright (c) Feross Aboukhadijeh  
Copyright (c) 2007 Mockito contributors This program is made available under the terms of the MIT License.  
Copyright (C) 2006-2008, Google Inc.  
Copyright (c) 2016 Bryan Braun  
Copyright (c) 2015-2016 TIBCO Software Inc.  
Copyright © 1991-2019 Unicode, Inc. All rights reserved.  
Copyright 2010-2018 Amazon.com, Inc. or its affiliates. All Rights Reserved.  
Copyright (c) 2004-2017 QOS.ch All rights reserved.  
Copyright (c) 2001-2017 Anders Moeller All rights reserved.  
Copyright (c) 2014-2016, Jon Schlinkert.  
Copyright (c) 2013 International Business Machines Corporation and others. All Rights Reserved.  
Copyright (c) 2004-2006 Intel Corporation - All Rights Reserved  
Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.  
Copyright (c) 2011- Lightbend, Inc.  
Copyright 2003-2005, Ernst de Haan <wfe.dehaan@gmail.com>  
Copyright 2014-2020 The Apache Software Foundation  
Copyright (c) 2011-2021 The Bootstrap Authors  
Copyright (c) 2004-2015 Paul R. Holser, Jr.  
Copyright (c) 2001-2016, Arno Unkrig  
Copyright 2005, 2012, 2013 jQuery Foundation and other contributors, https:jquery.org/  
Copyright (c) 2013 Thiago de Arruda  
Copyright (c) 1998-2011, Brian Wellington. All rights reserved.  
Copyright (c) 2012 Raynos.  
Copyright (c) 2009-2018, Barthelemy Dagenais and individual contributors. All rights reserved.  
Copyright (c) 2011 FuseSource Corp. All rights reserved.  
Copyright 2011, Google Inc.  
Copyright (c) 2014 Evan Wallace  
Copyright (c) 2015, Cloudpickle contributors.  
Copyright (C) 1989, 1991 Free Software Foundation, Inc.  
Copyright (c) 1999 Computer Systems and Communication Lab, Institute of Information Science, Academia Sinica. All rights reserved.  
Copyright (c) 2014 Jordan Harband  
Copyright (c) 1999 Pai-Hsiang Hsiao.  
Copyright (c) 2015, Jon Schlinkert.  
Copyright 2012-2013 (c) Mihai Bazon <mihai.bazon@gmail.com>  
Copyright (c) 2006-2011 The University of Colorado Denver. All rights reserved.  
Copyright (C) 2000-2004 Jason Hunter & Brett McLaughlin.  
Copyright 2011-2015 Twitter, Inc.   
Copyright (c) 2003-2017 Optimatika  
Copyright 2014, Google Inc. All rights reserved.  
Copyright (c) - Gray Watson  
Copyright (c) 1992-2011 The University of Tennessee and The University of Tennessee Research Foundation. All rights reserved.  
Copyright (c) 2014-2017, Jon Schlinkert  
Copyright (c) 2003-2014, Jodd Team All rights reserved.  
Copyright (c), Brian Grinstead, http:briangrinstead.com  
Copyright (c) Isaac Z. Schlueter and Contributors  
Copyright (c) 2009 `PiCloud, Inc.  
Copyright (c) 2010 Aleksander Williams  
Copyright (c) 2015-2016, Jon Schlinkert.  
Copyright (c) 2008,2009,2010 Massachusetts Institute of Technology.  
Copyright (c) 4-digit year, Company or Persons Name  
Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>  
Copyright (c) by Irmen de Jong  
Copyright (c) 2014-2017 Stefan Majer  
Copyright (c) 2014-2015, Jon Schlinkert.  
Copyright 2006-2011, the V8 project authors. All rights reserved.  
Copyright (c) 2011 Dominic Tarr  
Copyright (c) 2020 Bryan Braun  
Copyright (C) 2010-2013 Raymond Hill https:github.com/gorhill/Javascript-Voronoi  
Copyright (c) 2002- EPFL  
Copyright (c) Isaac Z. Schlueter  
Copyright (c) Microsoft Corporation. All rights reserved.  
Copyright (c) 2011-2021 Twitter, Inc.  
Copyright (C) 2008-2016, SpryMedia Ltd.  
Copyright (c) 2014 Jon Schlinkert  
Copyright (c) 2013 Samuel Halliday  
Copyright (c) 2014 Ivan Bozhanov  
Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>  
Copyright (c) Sindre Sorhus <sindresorhus@gmail.com> (sindresorhus.com)  
Copyright (c) 2000-2011 The University of California Berkeley. All rights reserved.  
Copyright (c) 2009 The Go Authors. All rights reserved.  
Copyright (c) 2011 The LevelDB Authors. All rights reserved.  
Copyright (c) 2011 TJ Holowaychuk <tj@vision-media.ca>  
Copyright (c) 2011-2016 Tim Wood, Iskren Chernev, Moment.js contributors  
Copyright (c) 2013 Forbes Lindesay  
Copyright (C) 2017 Alec Thomas  
Copyright (c) 1999 TaBE Project.  
Copyright 2008, Google Inc.  
Copyright (c) 2000-2011 ymnk, JCraft,Inc. All rights reserved.  
Copyright (c) 2015 Javier Blanco  
Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.  
Copyright (c) 2005, European Commission project OneLab under contract All rights reserved.  
Copyright 2008,2009,2010 Massachusetts Institute of Technology.  
Copyright (c) 2016 Jordan Harband  
Copyright (c) 2012 The FreeBSD Foundation All rights reserved.  
Copyright (c) 2013 Terence Parr All rights reserved.  
Copyright (c) 2015, Contributors  
Copyright (c) 2000,2001,2002,2003,2004 ymnk, JCraft,Inc. All rights reserved.  
Copyright (c) 2018 Nikita Skovoroda <chalkerx@gmail.com>  
Copyright (C) 2015 Jordan Harband  
Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)  
Copyright (c) scopt contributors  
Copyright (c) 1995-2000 by the Hypersonic SQL Group.  
Copyright 2011-2015 Twitter, Inc.  
Copyright (c) 2016 Bryan Braun; Licensed MIT  
Copyright (C) 2011-2014, Yann Collet.  
Copyright 2002 Niels Provos <provos@citi.umich.edu>  
Copyright (C) 2004 Sam Hocevar <sam@hocevar.net>  
Copyright 2014 The gRPC Authors  
Copyright (c) 2015 [these people](https:github.com/rollup/rollup/graphs/contributors)  
Copyright (c) 2011-2016, The Dojo Foundation  
Copyright (c) 1995-2016 International Business Machines Corporation and others All rights reserved.  
Copyright © 2010-2012 Brian M. Clapper. All rights reserved.  
Copyright (c) 2009 PiCloud, Inc. http:www.picloud.com.  
Copyright (c) 2013, LeRoy Benjamin Sharon All rights reserved.  
Copyright (c) 2012, Regents of the University of California.  
Copyright (c) 2014 International Business Machines Corporation and others. All Rights Reserved.  
Copyright (c) 2013-2018 Ivan Nikulin (ifaaan@gmail.com, https:github.com/inikulin)  
Copyright (c) 2000-2015 The Legion of the Bouncy Castle Inc. (http:www.bouncycastle.org)  
Copyright (c) 2005 - 2007 Javolution (http://javolution.org/)  
Copyright 2008 Google Inc. All rights reserved.  
Copyright 2012 The Netty Project Copy from netty 4.1.32.Final  
Copyright (C) 2013 Ben Frederickson  
Copyright (c) 2001-2016, The HSQL Development Group All rights reserved.  
Copyright 1996 Chih-Hao Tsai @ Beckman Institute, University of Illinois  
Copyright (c) 2015-2018 Google, Inc., Netflix, Inc., Microsoft Corp. and contributors  
Copyright (C) 2007 The Guava Authors  
Copyright (c) 2008, Nathan Sweet All rights reserved.  
Copyright (c) 2011 Alexander Shtuchkin  
Copyright (c) 2003-2020, Jodd Team All rights reserved.  
Copyright 2000, 2001, 2002, 2003 Nara Institute of Science and Technology. All Rights Reserved.  
Copyright (c) 2015 Taylor Hakes  
Copyright 2014, Google Inc. All rights reserved.

**License:** Apache License v2.0

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.