**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 1.12.7

**Copyright notice:**

Copyright (c) 2011-2016, The Dojo Foundation  
Copyright (c) 2012, Regents of the University of California.  
Copyright (c) 2015 Taylor Hakes  
+- FlinkLogicalCalc(select=[c, MOD(HASHCODE(c), 1024) AS $f1])  
Copyright (c) 2009 PiCloud, Inc. http:www.picloud.com.  
Copyright (C) 2013 Ben Frederickson  
Copyright (c) 2013 International Business Machines Corporation and others. All Rights Reserved.  
Copyright (C) 2000-2004 Jason Hunter & Brett McLaughlin.  
Copyright (c) 2015, Jon Schlinkert.  
Copyright (c) Sindre Sorhus <sindresorhus@gmail.com> (sindresorhus.com)  
Copyright (c) 2003-2020, Jodd Team All rights reserved.  
Copyright (c) 2001-2016, The HSQL Development Group 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) 2003-2017 Optimatika  
Copyright (c) 2008, Nathan Sweet All rights reserved.  
Copyright (c), Brian Grinstead, http:briangrinstead.com  
Copyright (c) 2013 Forbes Lindesay  
Copyright (c) 2013, LeRoy Benjamin Sharon All rights reserved.  
+- Calc(select=[c, MOD(HASHCODE(c), 1024) AS $f1])  
Copyright (c) 2010 Aleksander Williams  
Copyright 2014, Google Inc. All rights reserved.  
Copyright (c) scopt contributors  
Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>  
Copyright (c) 2020 Bryan Braun  
Copyright (c) 2015 [these people](https:github.com/rollup/rollup/graphs/contributors)  
Copyright (c) Feross Aboukhadijeh  
Copyright (c) 2011 Alexander Shtuchkin  
Copyright 2002 Niels Provos <provos@citi.umich.edu>  
Copyright 2014-2021 The Apache Software Foundation  
Copyright 2000, 2001, 2002, 2003 Nara Institute of Science and Technology. All Rights Reserved.  
Copyright (c) 2000-2011 The University of California Berkeley. All rights reserved.  
Copyright (c) 2011 TJ Holowaychuk <tj@vision-media.ca>  
Copyright (c) 1999 TaBE Project.  
dnsjava 2.1.7, Copyright (c) 1998-2011, Brian Wellington. All rights reserved.  
Copyright (c) 2000-2015 The Legion of the Bouncy Castle Inc. (http:www.bouncycastle.org)  
Copyright 2005, 2012, 2013 jQuery Foundation and other contributors, https:jquery.org/  
Copyright (c) 2011 FuseSource Corp. All rights reserved.  
Copyright (c) 1999 Pai-Hsiang Hsiao.  
Copyright (c) 2004-2015 Paul R. Holser, Jr.  
Copyright (c) 2011 The LevelDB Authors. All rights reserved.  
Copyright (c) 2016 Bryan Braun; Licensed MIT  
Copyright (c) 2014-2017, Jon Schlinkert  
Copyright (C) 2007 The Guava Authors  
Copyright © 2010-2012 Brian M. Clapper. All rights reserved.  
Copyright 2008, Google Inc.  
Copyright 2014, Google Inc. All rights reserved.  
Copyright © 1991-2019 Unicode, Inc. All rights reserved.  
Copyright (c) 2014 International Business Machines Corporation and others. All Rights Reserved.  
Copyright (C) 2010-2013 Raymond Hill https:github.com/gorhill/Javascript-Voronoi  
Copyright 2011-2015 Twitter, Inc.  
Copyright (c) 2013 Samuel Halliday  
Copyright (c) 2015-2016 TIBCO Software Inc.  
Copyright (c) 2014 Ivan Bozhanov  
Copyright (c) 2018 Nikita Skovoroda <chalkerx@gmail.com>  
Copyright (c) 2014 Jordan Harband  
Copyright (c) 2004-2017 QOS.ch All rights reserved.  
Copyright 2003-2005, Ernst de Haan <wfe.dehaan@gmail.com>  
Copyright (c) 2014-2016, Jon Schlinkert.  
Original license: Copyright (c) 2007 Mockito contributors This program is made available under the terms of the MIT License.  
Copyright (C) 2013 Brian Eugene Wilson, Robert Martin Campbell.  
Copyright 2014 The gRPC Authors  
Copyright (C) 2011-2014, Yann Collet.  
Copyright (c) 2011- Lightbend, Inc.  
Copyright (c) 2014-2015, Jon Schlinkert.  
Copyright (c) 2011, Joe Walnes, Aslak Hellesøy and contributors All rights reserved.  
+- Calc(select=[b, c, MOD(HASHCODE(c), 1024) AS $f2], changelogMode=[I,UB,UA,D])  
Copyright (c) 2014 Jon Schlinkert  
Copyright 2010-2018 Amazon.com, Inc. or its affiliates. All Rights Reserved.  
Copyright (c) 1999 Computer Systems and Communication Lab, Institute of Information Science, Academia Sinica. All rights reserved.  
Copyright (c) 1992-2011 The University of Tennessee and The University of Tennessee Research Foundation. All rights reserved.  
Copyright (C) 2006-2008, Google Inc.  
+- FlinkLogicalCalc(select=[a, c, MOD(HASHCODE(c), 1024) AS $f2])  
+- OverAggregate(orderBy=[rowtime ASC], window=[ RANG BETWEEN 10000 PRECEDING AND CURRENT ROW], select=[a, c, rowtime, COUNT(c) AS w0$o0])  
+- SortWindowAggregate(groupBy=[b], window=[SlidingGroupWindow(w$, ts, 1000, 111)], select=[b, MAX(c) AS EXPR$0])  
epubcopyright = u2019, Author  
Copyright (c) 2002- EPFL  
Copyright (c) 1998-2011 The OpenSSL Project. All rights reserved.  
Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)  
- Bootstrap v3.3.4 (http:getbootstrap.com) Copyright 2011-2015 Twitter, Inc. -> fonts in docs/page/fonts  
Copyright (c) 2012 The FreeBSD Foundation All rights reserved.  
Copyright (c) 2001-2016, Arno Unkrig  
Copyright (c) by Irmen de Jong  
Copyright (c) 2004-2006 Intel Corporation - All Rights Reserved  
Copyright (c) 2000-2011 ymnk, JCraft,Inc. All rights reserved.  
Copyright (c) 2011-2021 The Bootstrap Authors  
Copyright (c) 2012 Raynos.  
Copyright 2011, Google Inc.  
Copyright 2006-2011, the V8 project authors. All rights reserved.  
+- OverAggregate(orderBy=[proctime ASC], window=[ RANG BETWEEN 10000 PRECEDING AND CURRENT ROW], select=[a, c, proctime, COUNT(c) AS w0$o0])  
Copyright (c) 1995-2000 by the Hypersonic SQL Group.  
Copyright (c) 2009 The Go Authors. All rights reserved.  
Copyright (c) 2013 Thiago de Arruda  
Copyright (C) 2008-2016, SpryMedia Ltd.  
Copyright (c) 2015 Javier Blanco  
Copyright (c) Microsoft Corporation. All rights reserved.  
Copyright 2008 Google Inc. All rights reserved.  
Copyright (c) Isaac Z. Schlueter and Contributors  
Copyright (c) 2014 Evan Wallace  
Copyright (c) 2011-2021 Twitter, Inc.  
Copyright (c) 2011 Dominic Tarr  
Copyright (c) 2009-2018, Barthelemy Dagenais and individual contributors. All rights reserved.  
Copyright (c) 2015, Cloudpickle contributors.  
Copyright (c) 1995-2016 International Business Machines Corporation and others All rights reserved.  
Copyright (c) 2003-2014, Jodd Team All rights reserved.  
Copyright (c) 2015-2016, Jon Schlinkert.  
Copyright (c) 2013-2018 Ivan Nikulin (ifaaan@gmail.com, https:github.com/inikulin)  
+- Calc(select=[a, c, MOD(HASHCODE(c), 1024) AS $f2])  
Copyright (c) 2001-2017 Anders Moeller All rights reserved.  
Copyright (c) 2015-2018 Google, Inc., Netflix, Inc., Microsoft Corp. and contributors  
Copyright (C) 1989, 1991 Free Software Foundation, Inc.  
Copyright (c) Isaac Z. Schlueter  
Copyright 2012-2013 (c) Mihai Bazon <mihai.bazon@gmail.com>  
+ Copyright 2014-2020 The Apache Software Foundation  
Copyright (c) 2008,2009,2010 Massachusetts Institute of Technology.  
Copyright (c) 2016 Jordan Harband  
Copyright (c) 2013 Julian Gruber <julian@juliangruber.com>  
Copyright (c) 2015, Contributors  
Copyright 1996 Chih-Hao Tsai @ Beckman Institute, University of Illinois  
Copyright (c) 2014-2017 Stefan Majer  
Copyright (C) 2015 Jordan Harband  
Copyright (c) 2009 `PiCloud, Inc. <https:web.archive.org/web/20140626004012/http:www.picloud.com/>`.  
Copyright (c) 4-digit year, Company or Persons Name  
- AnchorJS v3.1.0 (https:github.com/bryanbraun/anchorjs) Copyright (c) 2016 Bryan Braun  
Copyright (c) 2012-2019, Javolution (http://javolution.org/)  
- simplejmx (http:256stuff.com/sources/simplejmx/) Copyright (c) - Gray Watson  
Copyright (c) 2000,2001,2002,2003,2004 ymnk, JCraft,Inc. All rights reserved.  
Copyright (c) 2005 - 2007 Javolution (http://javolution.org/)  
+- FlinkLogicalCalc(select=[a, b, c, MOD(HASHCODE(b), 1024) AS $f3, MOD(HASHCODE(c), 1024) AS $f4])  
Copyright (c) 2006-2011 The University of Colorado Denver. All rights reserved.  
Copyright 2012 The Netty Project Copy from netty 4.1.32.Final  
Copyright (c) 2011-2016 Tim Wood, Iskren Chernev, Moment.js contributors  
+- Calc(select=[a, b, c, MOD(HASHCODE(b), 1024) AS $f3, MOD(HASHCODE(c), 1024) AS $f4])

**License:** Apache License v2.0