**OPEN SOURCE SOFTWARE NOTICE**

The open source software notice for the open source software used in this openEuler distribution (“openEuler distribution”) is provided in this document. The open source software licenses are granted by the respective right holders. With regard to the respective open source software contained in the openEuler distribution, the applicable open source software license will prevail all other license agreement, including but not limited to the openEuler Software License, in case of any conflicts.

**Warranty Disclaimer**

**THE OPEN SOURCE SOFTWARE IN THIS OPENEULER DISTRIBUTION IS PROVIDED ON AN "AS IS" BASIS, WITHOUT ANY WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.  
See the applicable licenses for more details.**

**Copyright Notice and License Texts**

Software: mvapich2 2.3.6

**Copyright notice:**

Copyright © 2013-2016 Inria. All rights reserved.  
Copyright (C) 2014 UChicgo/Argonne, LLC.  
Copyright © 2010-2014 Inria. All rights reserved.  
Copyright © 2012-2021 Inria. All rights reserved.  
Copyright (c) 2007-2009, Konkuk University All rights reserved.  
Copyright © 2004-2005 The Regents of the University of California. All rights reserved.  
Copyright (C) 2007 Oak Ridge National Laboratory  
Copyright (C) 1997, 1998, 2000, 2002, 2003, 2007, 2008 Free Software Foundation, Inc.  
Copyright (c) 2009-2011 Universit?eacute; Bordeaux  
Copyright (C) 2007 UChicago/Argonne LLC.  
Copyright (C) 1997 University of Chicago.  
Copyright © 2015-2016 Intel, Inc. All rights reserved.  
Copyright © 2015-2016, 2015 Intel  
Copyright (C) 2005 University of Chicago.  
Copyright (C) 2002 University of Chicago.  
Copyright © 2009-2012, 2020 Université Bordeaux  
Copyright (c) 2001-2021, The Ohio State University. All rights reserved.  
Copyright © 2009 CNRS  
Copyright © 2013, 2018 Université Bordeaux. All right reserved.  
Copyright © 2009, 2011, 2018 Université Bordeaux See COPYING in top-level directory.  
Copyright (C) 2004 Free Software Foundation, Inc.  
Copyright © 2009-2012 Inria. All rights reserved.  
Copyright © 2020 Inria. All rights reserved.  
Copyright © 2009-2012 Oracle and/or its affiliates. All rights reserved.  
Copyright © 2009-2011 Cisco Systems, Inc. All rights reserved.  
Copyright © 2012-2013 Inria. All rights reserved.  
Copyright © 2004-2006 The Trustees of Indiana University and Indiana University Research and Technology Corporation. All rights reserved.  
Copyright © 2009-2013 inria. All rights reserved.  
Copyright (C) 1984, 1989-1990, 2000-2011 Free Software Foundation, Inc.  
Copyright © 2011-2020 Inria. All rights reserved.  
Copyright © 2009-2015 Université Bordeaux  
Copyright © 2004-2005 The Trustees of Indiana University and Indiana University Research and Technology Corporation. All rights reserved.  
Copyright © 2013-2017 Inria. All rights reserved.  
Copyright © 2009-2010 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2010-2021 Inria. All rights reserved.  
Copyright © 2012-2015 Inria. All rights reserved.  
Copyright (c) 2010, Rogue Wave Software, Inc.  
Copyright © 2015-2018 Intel  
Copyright © 2009-2020 Cisco Systems, Inc. All rights reserved.  
Copyright (c) 2009-2015 Inria. All rights reserved.  
Copyright © 2009, 2011, 2012, 2015 Université Bordeaux. All rights reserved.  
Copyright (c) 2008-2013 The Khronos Group Inc.  
Copyright (c) 2008-2011, Troy D. Hanson http:uthash.sourceforge.net All rights reserved.  
Copyright © 2009-2010 Université Bordeaux  
Copyright © 2011 Université Bordeaux  
Copyright © 2014-2018 Cisco Systems, Inc. All rights reserved.  
Copyright © 2012 Aleksej Saushev, The NetBSD Foundation  
Copyright © 2012 Blue Brain Project, BBP/EPFL. All rights reserved.  
Copyright © 2015-2017 Inria. All rights reserved.  
Copyright © 2009-2013, 2015, 2020 Université Bordeaux  
Copyright © 2009-2010, 2014 Université Bordeaux  
Copyright (c) 1995 by International Business Machines, Inc.  
Copyright © 2011-2012 Inria. All rights reserved.  
Copyright © 2010-2017 Inria. All rights reserved.  
Copyright © 20012-2014 Inria. All rights reserved.  
Copyright © 2009 Cisco Systems, Inc. All rights reserved.  
Copyright (C) 2017 DataDirect Networks.  
Copyright (c) 1991, 1993 The Regents of the University of California. All rights reserved.  
Copyright © 2009, 2011, 2012 CNRS. All rights reserved.  
Copyright © 2013 Inria. All rights reserved.  
Copyright © 2004-2005 The University of Tennessee and The University of Tennessee Research Foundation. All rights reserved.  
Copyright (C) 1997 University of Chicago.  
Copyright © 2010 Jirka Hladky  
Copyright © 2009-2010, 2012 Université Bordeaux  
Copyright © 2013-2014 University of Wisconsin-La Crosse. All rights reserved.  
Copyright (c) 2009, Lawrence Livermore National Security, LLC.  
Copyright © 2009-2013, 2015 Université Bordeaux  
Copyright © 2016 Cisco Systems, Inc. All rights reserved.  
Copyright © 2009-2017 Inria. All rights reserved.  
Copyright © 2009-2011 Université Bordeaux  
Copyright © 2009, 2011, 2012 CNRS, inria., Université Bordeaux All rights reserved.  
Copyright © 2009-2015 Inria. All rights reserved.  
Copyright © 2009, 2012 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2012-2019 Inria. All rights reserved.  
Copyright © 2011 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2009, 2011, 2012 Université Bordeaux. All rights reserved.  
Copyright © 2009-2012, 2015 Université Bordeaux  
Copyright © 2010-2013 Inria. All rights reserved.  
Copyright (c) 2007 Microsoft Corporation. Microsoft grants permission to use, reproduce, prepare derivative works, and to redistribute to others. The code is licensed as is. The User bears the risk of using it. Microsoft gives no express warranties, guarantees or conditions. To the extent permitted by law, Microsoft excludes the implied warranties of merchantability, fitness for a particular purpose and non-infringement.  
Copyright (c) 2001-2018, The Ohio State University. All rights reserved.  
Copyright © 2011-2013 Inria. All rights reserved.  
Copyright © 2009-2010, 2012, 2015 Université Bordeaux  
Copyright © 2020 Hewlett Packard Enterprise. All rights reserved.  
Copyright © 2011-2021 Inria. All rights reserved.  
Copyright © 2009 Université Bordeaux See COPYING in top-level directory.  
Copyright (C) 2003 University of Chicago.  
Copyright © 2009-2010, 2013 Université Bordeaux  
Copyright © 2011-2019 Inria. All rights reserved.  
Copyright © 2014 Cisco Systems, Inc. All rights reserved.  
Copyright © 2017 Inria. All rights reserved.  
Copyright © 2011-2014 Inria. All rights reserved.  
Copyright (C) 2011-2017 Almende B.V, http://almende.com  
Copyright © 2018-2020 Inria. All rights reserved.  
Copyright (c) 2012-2016 Polidea  
Copyright © 2010-2014 Cisco Systems, Inc. All rights reserved.  
Copyright (C) 2013 UChicago/Argonne, LLC See COPYRIGHT notice in top-level directory.  
Copyright (c) 2001-2006 Wolfram Gloger  
Copyright © 2009-2011, 2013 Université Bordeaux  
Copyright © 2009-2012 Université Bordeaux See COPYING in top-level directory.  
Copyright (C) 2008 University of Chicago.  
Copyright © 2009, 2012 Université Bordeaux  
Copyright © 2009, 2017 Université Bordeaux  
Copyright (c) 2007-2011, Troy D. Hanson http:uthash.sourceforge.net All rights reserved.  
Copyright (C) 1999-2001 The Regents of the University of California (through E.O. Lawrence Berkeley National Laboratory), subject to approval by the U.S. Department of Energy.  
Copyright (c) 2008-2014, Troy D. Hanson http:troydhanson.github.com/uthash/  
Copyright © 2015 Intel, Inc. All rights reserved.  
Copyright © 2009-2018 Inria. All rights reserved.  
Copyright (C) 2000 Etnus, LLC  
Copyright © 2019 Inria. All rights reserved.  
Copyright © 2015 Inria. All rights reserved.  
Copyright © 2016-2017 Inria. All rights reserved.  
Copyright (C) 2008 Sun Microsystems, Lustre group  
Copyright © 2009-2010, 2020 Université Bordeaux  
Copyright © 2009-2010, 2012, 2020 Université Bordeaux  
Copyright © 2010 inria. All rights reserved.  
Copyright (c) 2020, Advanced Micro Devices, Inc. All rights reserved.  
Copyright © 2010-2011 Cisco Systems, Inc. All rights reserved.  
Copyright © 2010 IBM See COPYING in top-level directory.  
Copyright © 2004-2005 The Regents of the University of California.  
Copyright © 2010-2015 Inria. All rights reserved.  
Copyright © 2009-2010 inria. All rights reserved.  
Copyright © 2017-2020 Inria. All rights reserved.  
Copyright (C) 2011-2012 Intel Corporation. Intel provides this material to Argonne National Laboratory subject to Software Grant and Corporate Contributor License Agreement dated February 8, 2012.  
Copyright (C) 2004 by Argonne National Laboratory.  
Copyright © 2013 Université Bordeaux. All right reserved.  
Copyright © 2011-2018 Inria. All rights reserved.  
Copyright © 2014 Inria. All rights reserved.  
Copyright © 2009-2012 Université Bordeaux  
Copyright © 2011 Cisco Systems, Inc. All rights reserved.  
Copyright © 2018 Inria. All rights reserved.  
Copyright (c) 2005 Mellanox Technologies Ltd. All rights reserved.  
Copyright © 2012-2014 Inria. All rights reserved.  
Copyright © 2013-2021 Inria. All rights reserved.  
Copyright © 2009-2020 Inria. All rights reserved.  
Copyright © 2010-2018 Inria. All rights reserved.  
Copyright (C) 2003 University of Chicago, Ohio Supercomputer Center.  
Copyright (c) 2016, Intel, Inc. All rights reserved.  
Copyright © 2009-2016 Inria. All rights reserved.  
Copyright © 2009-2011,2017 Université Bordeaux  
Copyright © 2012 Blue Brain Project, EPFL. All rights reserved.  
Copyright © 2013-2015 Inria. All rights reserved.  
Copyright © 2011 inria. All rights reserved.  
Copyright (c) 2009, Lawrence Livermore National Security, LLC.  
Copyright © 2013-2014 Cisco Systems, Inc. All rights reserved.  
Copyright © 2009-2010, 2014, 2017 Université Bordeaux  
Copyright © 2008-2014 Cisco Systems, Inc. All rights reserved.  
Copyright © 2009-2013 Université Bordeaux  
Copyright © 2011-2017 Inria. All rights reserved.  
(C) 2008 by University of Illinois See COPYRIGHT in top-level directory.  
Copyright © 2009-2010, 2014, 2017, 2020 Université Bordeaux  
Copyright © 2015-2016 Inria. All rights reserved.  
Copyright © 2010-2013 Université Bordeaux  
Copyright © 2012 Université Bordeau 1  
Copyright © 2009-2019 Inria. All rights reserved.  
Copyright © 2009, 2011 Université Bordeaux  
Copyright © 2012-2017 Inria. All rights reserved.  
Copyright © 2015 Research Organization for Information Science and Technology (RIST). All rights reserved.  
Copyright © 2009-2010 Cisco Systems, Inc. All rights reserved.  
Copyright © 2012 Inria. All rights reserved.  
Copyright © 2014-2018 Inria. All rights reserved.  
Copyright © 2009-2011 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2013-2018 Inria. All rights reserved.  
Copyright © 2012 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2016-2018 Inria. All rights reserved.  
Copyright © 2009-2011, 2020 Université Bordeaux  
Copyright © 2009, 2011 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2009-2021 Inria. All rights reserved.  
Copyright © 2016-2020 Inria. All rights reserved.  
Copyright © 2012-2020 Inria. All rights reserved.  
Copyright © 2009 inria. All rights reserved.  
Copyright © 2009-2010, 2012 Université Bordeaux See COPYING in top-level directory.  
Copyright © 2009-2018 Cisco Systems, Inc. All rights reserved.  
Copyright (C) 2003-2021 the Network-Based Computing Laboratory (NBCL), The Ohio State University.  
Copyright (C) 2004 University of Chicago.  
Copyright © 2013-2014 University of Wisconsin-La Crosse.  
Copyright (C) 2006 Unknown (TODO: fix this)  
Copyright © 2012 Blue Brain Project, EPFL. All rights reserved.  
Copyright © 2011-2012 Université Bordeaux  
Copyright © 2011 Oracle and/or its affiliates. All rights reserved.  
Copyright © 2015-2018 Inria. All rights reserved.  
Copyright © 2009-2011 inria. All rights reserved.  
Copyright © 2010-2012, 2014 Université Bordeaux  
Copyright (c) 1996 by Internet Software Consortium.  
Copyright © 2009-2015 Cisco Systems, Inc. All rights reserved.  
Copyright (C) 2007 University of Chicago.  
Copyright © 2011-2015 Inria. All rights reserved.  
Copyright © 2009-2014 Inria. All rights reserved.  
Copyright (C) 2002-2021 the Network-Based Computing Laboratory (NBCL), The Ohio State University.  
Copyright © 2012-2018 Inria. All rights reserved.  
Copyright © 2009-2012, 2015, 2017 Université Bordeaux  
Copyright (C) 2001 University of Chicago.  
Copyright © 2013-2019 Inria. All rights reserved.  
Copyright (C) 2006 University of Chicago.  
Copyright (C) 1997 University of Chicago  
Copyright © 2012-2013 Blue Brain Project, BBP/EPFL. All rights reserved.  
Copyright (C) 2013 University of Chicago.  
MVICH Copyright (c) 1998-2000, The Regents of the University of California, through Lawrence Berkeley National Laboratory (subject to receipt of any required approvals from U.S. Dept. of Energy). All rights reserved.  
Copyright © 2015-2020 Inria. All rights reserved.  
Copyright © 2015-2021 Inria. All rights reserved.  
Copyright © 2009-2013 Inria. All rights reserved.  
Copyright (C) 1997-1998 Dolphin Interconnect Solutions Inc.  
Copyright © 2010-2011 Université Bordeaux  
Copyright © 2012 Aleksej Saushev, The NetBSD Foundation  
Copyright (c) 2008-2018 The Khronos Group Inc.  
Copyright (c) 2003-2013, Troy D. Hanson http:troydhanson.github.com/uthash/  
Copyright (C) 2004 Wolfram Gloger <wg@malloc.de>.  
Copyright © 2009 Université Bordeaux  
Copyright © 2018-2019 Inria. All rights reserved.  
Copyright (c) 2001 by Myricom, Inc.  
Copyright © 2012-2016 Inria. All rights reserved.  
Copyright © 2010 University of Blabbityblah and the Trustees of Schblitbittyboo. All rights reserved.  
Copyright © 2010-2014 Inria. All rights reserved.  
Copyright (C) 2007 UChicago/Argonne LLC See COPYRIGHT notice in top-level directory.  
Copyright © 2010 Cisco Systems, Inc. All rights reserved.  
Copyright © 2009-2014 Cisco Systems, Inc. All rights reserved.  
Copyright (C) 1984, 1989-1990, 2000-2015, 2018-2020 Free Software Foundation, Inc.  
Copyright (C) 1997-2001 University of Chicago.  
Copyright © 2011-2015 Cisco Systems, Inc. All rights reserved.  
Copyright © 2013-2020 Inria. All rights reserved.  
Copyright © 2009 CNRS  
Copyright (c) 2003-2014, Troy D. Hanson http:troydhanson.github.com/uthash/  
Copyright © 2016 Inria. All rights reserved.  
Copyright (c) 2009-2010 Cisco Systems, Inc. All rights reserved.  
Copyright © 2011 Université Bordeaux. All rights reserved.  
Copyright © 2020-2021 Inria. All rights reserved.  
Copyright © 2013 Cisco Systems, Inc. All rights reserved.  
Copyright © 2004-2005 High Performance Computing Center Stuttgart, University of Stuttgart. All rights reserved.  
name and copyright statement (e.g., Cisco Systems, Inc. All rights reserved.) before running the script.  
Copyright © 2019-2020 Inria. All rights reserved.  
Copyright © 2013 Université Bordeaux. All rights reserved.  
Copyright © 2013-2014 Inria. All rights reserved.  
Copyright © 2010-2019 Inria. All rights reserved.  
Copyright © 2009-2010 Oracle and/or its affiliates. All rights reserved.  
Copyright © 2010-2020 Inria. All rights reserved.

**License:** BSD and MIT

BSD Zero Clause License  
Copyright (C) 2006 by Rob Landley <rob@landley.net>  
  
Permission to use, copy, modify, and/or distribute this software for any purpose with or without fee is hereby granted.  
  
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.  
  
  
MIT License  
  
Copyright (c) <year> <copyright holders>  
  
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.