

# Oracle® Database

## Database Licensing Information User Manual



19c  
E94254-54  
August 2024

ORACLE®

Copyright © 2004, 2024, Oracle and/or its affiliates.

Contributors: Prabhaker Gongloor, Mughees Minhas, Anu Natarajan, Jill Robinson, Jenny Tsai-Smith

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

# Contents

## Preface

---

Audience	vi
Documentation Accessibility	vi
Diversity and Inclusion	vi
Related Documents	vi
Conventions	vii

## 1 Licensing Information

---

1.1	Introduction	1-1
1.2	Oracle Database Offerings	1-1
1.3	Permitted Features, Options, and Management Packs by Oracle Database Offering	1-3
1.4	Oracle Database Options and Their Permitted Features	1-17
1.5	Oracle Management Packs and Their Permitted Features	1-23
1.6	Checking for Feature, Option, and Management Pack Usage	1-45
1.7	Special License Rights	1-46
1.8	Restricted Use Licenses	1-49

## 2 Third-Party Notices and/or Licenses

---

2.1	Third-Party Notices and/or Licenses for Oracle Database	2-1
2.1.1	Commercial Software Included in Oracle Database	2-1
2.1.2	Open Source or Other Separately Licensed Software Included in Oracle Database	2-1
2.2	Third-Party Notices and/or Licenses for Oracle Database Components	2-29
2.2.1	Commercial Software Included in Oracle Database Components	2-29
2.2.2	Open Source or Other Separately Licensed Software Included in Oracle Database Components	2-29
2.3	Written Offer for Source Code	2-51

## A Open Source Software License Text

---

A.1	Apache Commons Math 3.6.1 License	A-1
A.2	Apache HC Fluent 4.5.6 License	A-5

A.3	Apache Tomcat 8.5.37 License	A-11
A.4	Archive::Zip 1.57 License	A-25
A.5	Artistic License	A-29
A.6	Batik SVG Toolkit 1.10 License	A-31
A.7	Compress::Raw::Zlib 2.081 License	A-48
A.8	DBD-Oracle 1.76 License	A-53
A.9	DOM (Dom Level 3 core specification, Version 1.0) License	A-57
A.10	DeepLearning4j 0.9.1 License	A-58
A.11	File::Slurp 9999.19 License	A-65
A.12	Font Awesome 4.5 License	A-69
A.13	Font Awesome 5.1.0 License	A-70
A.14	GeoNames Data 1.1.11 License	A-72
A.15	Geospatial Data Abstraction Library/OpenGIS Simple Features Reference Implementation (GDAL/OGR) 2.4 License	A-77
A.16	HttpComponents HttpClient 4.5.6 License	A-82
A.17	HttpComponents HttpClient 4.5.7 License	A-89
A.18	HttpCore 4.4.10 License	A-95
A.19	HttpCore 4.4.11 License	A-99
A.20	IO::String 1.08 License	A-101
A.21	JSch 0.1.55 License	A-104
A.22	JavaScript Extension Toolkit (JET) 4.1.0 License	A-106
A.23	JavaScript Extension Toolkit (JET) 4.2.0 License	A-113
A.24	JavaScript Extension Toolkit (JET) 5.1.0 License	A-120
A.25	JavaScript Extension Toolkit (JET) 6.0.0 License	A-127
A.26	Jetty 9.4.12 License	A-133
A.27	Kerberos 1.16.2 License	A-134
A.28	Log4J 2.11.1 License	A-154
A.29	Lucene 7.5.0 License	A-156
A.30	ND4J 0.9.1 License	A-174
A.31	OpenJPEG 2.1 License	A-175
A.32	PCRE 10.23 License	A-178
A.33	PDFBox 2.0.12 License	A-179
A.34	Perl 5.28.1 License	A-182
A.35	Perl DBI 1.642 License	A-189
A.36	Protocol Buffers (aka Google protobuf) 3.5.1 License	A-196
A.37	Python 3.7.1 License	A-198
A.38	Sys::SigAction 0.21 License	A-201
A.39	The Apache Software License, Version 1.1	A-205
A.40	The Apache Software License, Version 2.0	A-206
A.41	XMLBeans 2.6.4 License	A-209
A.42	XML::Simple 2.25 License	A-210
A.43	Xerces2 Java 2.12.0 License	A-211

A.44 httpmime 4.5.7 License

A-213

A.45 zip 3.0 License

A-218

## Index

---

# Preface

This Preface contains these topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Diversity and Inclusion](#)
- [Related Documents](#)
- [Conventions](#)

## Audience

This book is intended for all purchasers of Oracle Database 19c.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

## Related Documents

For more information, see these Oracle resources:

- *Oracle Database New Features Guide* for information on the features new to this release of Oracle Database
- Oracle Global Pricing and Licensing, available at:

<http://www.oracle.com/us/corporate/pricing/index.html>

- Oracle Database licensing guidelines, available at:  
<https://www.oracle.com/assets/databaselicensing-070584.pdf>

## Conventions

The following text conventions are used in this document:

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
<code>monospace</code>	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

# 1

## Licensing Information

- [Introduction](#)
- [Oracle Database Offerings](#)
- [Permitted Features, Options, and Management Packs by Oracle Database Offering](#)
- [Oracle Database Options and Their Permitted Features](#)
- [Oracle Management Packs and Their Permitted Features](#)
- [Checking for Feature, Option, and Management Pack Usage](#)
- [Special License Rights](#)
- [Restricted Use Licenses](#)

### 1.1 Introduction

This Licensing Information document is a part of the product or program documentation under the terms of your Oracle license agreement and is intended to help you understand the program editions, entitlements, restrictions, prerequisites, special license rights, and/or separately licensed third party technology terms associated with the Oracle software program(s) covered by this document (the "Program(s)"). Entitled or restricted use products or components identified in this document that are not provided with the particular Program may be obtained from the Oracle Software Delivery Cloud website (<https://edelivery.oracle.com>) or from media Oracle may provide. If you have a question about your license rights and obligations, please contact your Oracle sales representative, review the information provided in Oracle's Software Investment Guide (<http://www.oracle.com/us/corporate/pricing/software-investment-guide/index.html>), and/or contact the applicable Oracle License Management Services representative listed on <http://www.oracle.com/us/corporate/license-management-services/index.html>.

### 1.2 Oracle Database Offerings

**Table 1-1 Oracle Database Offerings**

Oracle Database Offering	License Deployment Options	Abbreviated Name Used in this Guide	Description
Oracle Database Standard Edition 2	On-Premises, OCI*, and ACEs**	<b>SE2</b>	Oracle Database Standard Edition 2 includes features necessary to develop workgroup, department-level, and Web applications.



Table 1-1 (Cont.) Oracle Database Offerings

Oracle Database Offering	License Deployment Options	Abbreviated Name Used in this Guide	Description
Oracle Database Enterprise Edition	On-Premises, OCI*, and ACES**	<b>EE</b>	<p>Oracle Database Enterprise Edition provides performance, availability, scalability, and security for developing applications such as high-volume online transaction processing (OLTP) applications, query-intensive data warehouses, and demanding Internet applications.</p> <p>Oracle Database Enterprise Edition can be enhanced with the purchase of Oracle Database options and Oracle management packs.</p>
Oracle Database Enterprise Edition on Engineered Systems	On-Premises, OCI*, and ACES**	<b>EE-ES</b>	<p>Oracle Database Enterprise Edition software installed on an engineered system (Oracle Exadata Database Machine or Oracle Database Appliance).</p> <p>Includes all of the components of Oracle Database. You can further enhance this offering with the purchase of Oracle Database options and Oracle management packs.</p> <p>The licensing policies for EE-ES vary depending on whether it is installed on Oracle Exadata Database Machine or Oracle Database Appliance. Be sure to make note of these differences, which are documented in the subsequent sections of this guide.</p>
Oracle Database Personal Edition	On-Premises	<b>PE</b>	<p>Oracle Database Personal Edition supports single-user development and deployment environments that require full compatibility with Oracle Database Standard Edition 2 and Oracle Database Enterprise Edition.</p> <p>Includes all of the components that are included with Enterprise Edition, as well as all Oracle Database options, with the exception of the Oracle RAC One Node and Oracle Real Application Clusters options, which cannot be used with Personal Edition. Personal Edition is available on Linux and Windows platforms only. Oracle management packs cannot be used with Personal Edition.</p>
Oracle Base Database Service Standard Edition	OCI*	<b>BaseDB SE</b>	Includes Oracle Database Standard Edition 2 software
Oracle Base Database Service Enterprise Edition	OCI*	<b>BaseDB EE</b>	Includes Oracle Database Enterprise Edition software
Oracle Base Database Service Enterprise Edition - High Performance	OCI*	<b>BaseDB EE-HP</b>	Includes Oracle Base Database Service Enterprise Edition software plus many Oracle Database options and Oracle management packs
Oracle Base Database Service Enterprise Edition - Extreme Performance	OCI*	<b>BaseDB EE-EP</b>	Includes Oracle Base Database Service Enterprise Edition software plus all Oracle Database options and Oracle management packs that are appropriate for use in the cloud.

**Table 1-1 (Cont.) Oracle Database Offerings**

Oracle Database Offering	License Deployment Options	Abbreviated Name Used in this Guide	Description
Oracle Exadata Database Service on Dedicated Infrastructure Oracle Exadata Database Service on Cloud@Customer	OCI*	<b>ExaDB</b>	This guide uses <b>ExaDB</b> to describe the licensing policies for both Oracle Exadata Database Service on Dedicated Infrastructure and Oracle Exadata Database Service on Cloud@Customer.  These offerings include Oracle Database Enterprise Edition software plus all Oracle Database options and Oracle management packs that are appropriate for use in Oracle Exadata Database Service on Dedicated Infrastructure or Oracle Exadata Database Service on Cloud@Customer.

\* OCI: Oracle Cloud Infrastructure

\*\*ACEs: Authorized Cloud Environments



**Note:**

For the list of Authorized Cloud Environments, see <https://www.oracle.com/assets/cloud-licensing-070579.pdf>. All other public clouds and environments that are in any way considered an extension of non-Authorized Cloud Environments, such as cloud management, cloud billing, cloud support, cloud automation, cloud images, or cloud monitoring software, are not Authorized Cloud Environments.

## 1.3 Permitted Features, Options, and Management Packs by Oracle Database Offering

The tables in this section list Oracle Database features, Oracle Database options, and Oracle management packs, and their availability for each Oracle Database offering. The **Y** value in a column means that the feature, option, or pack is available for a particular offering; **N** means that it is unavailable; **N/A** means that it is not applicable. These tables can help you understand the difference between Oracle Database offerings to determine which one is right for you.

The tables are organized into the following functional categories:

- Consolidation - [Table 1-2](#)
- Development Platform - [Table 1-3](#)
- High Availability - [Table 1-4](#)
- Integration - [Table 1-5](#)
- Manageability - [Table 1-6](#)
- Networking - [Table 1-7](#)
- Performance - [Table 1-8](#)
- Scalability - [Table 1-9](#)

- Security - [Table 1-10](#)
- Snapshots and Cloning - [Table 1-11](#)
- Spatial and Graph Data - [Table 1-12](#)
- VLDB, Data Warehousing, and Business Intelligence - [Table 1-13](#)

**Table 1-2 Consolidation**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Multitenant - # of PDBs	3	252	4096	3	3	4096	4096	4096	<p>The number value in each column indicates the maximum number of pluggable databases (PDBs) that can be created for each offering.</p> <ul style="list-style-type: none"> <li>• For all offerings, if you are not licensed for Oracle Multitenant, then you may have up to 3 user-created PDBs in a given container database at any time.</li> <li>• <b>EE:</b> Extra cost option; if you are licensed for Oracle Multitenant, then you can create up to 252 PDBs.</li> <li>• <b>EE-ES:</b> Extra cost option; if you are licensed for Oracle Multitenant, then you can create up to 4096 PDBs.</li> <li>• <b>BaseDB EE-HP, BaseDB EE-EP, and ExaDB:</b> License included option: You can create up to 4096 PDBs. BYOL option: Limit is 3 PDBs, unless you purchase the Oracle Multitenant option.</li> </ul> <p><b>Authorized Cloud Environments:</b> Use is limited to three pluggable databases per container database.</p> <p><b>Note:</b> For licensing purposes, one non-CDB instance is equivalent to one user-created PDB inside one CDB.</p>
CDB Fleet Management	N	N	Y	N	Y	Y	Y	Y	
PDB Snapshot Carousel	N	N	Y	N	Y	Y	Y	Y	
Refreshable PDB switchover	N	N	Y	Y	Y	Y	Y	Y	

**Table 1-3 Development Platform**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
SQLJ	Y	Y	Y	Y	Y	Y	Y	Y	Requires Oracle Programmer
Oracle Developer Tools for Visual Studio	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Microsoft Distributed Transaction Coordinator support	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Native .NET Data Provider—ODP.NET	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
.NET Stored Procedures	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only

**Table 1-4 High Availability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Application Continuity	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option, the Oracle RAC One Node option, or the Oracle Real Application Clusters option
Oracle Sharding	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : No limit on the number of either primary shards or standby shards if every shard has an Oracle Active Data Guard, Oracle GoldenGate, or Oracle RAC license. Without an Oracle Active Data Guard, Oracle GoldenGate, or Oracle RAC license, use is limited to three primary shards, with basic Data Guard standbys.  <b>BaseDB EE, BaseDB EE-HP, and Authorized Cloud Environments</b> : Use is limited to three primary shards; there is no limit on the number of standby shards.  <b>BaseDB EE-EP and ExaDB</b> : No limit on the number of either primary shards or standby shards.
Oracle Fail Safe	Y	Y	N/A	N/A	N/A	N/A	N/A	N/A	Windows only
Oracle RAC One Node	N	Y	Y	N	N	N	N	N	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Standard Edition High Availability	Y	N	N	N	N	N	N	N	
Enterprise Edition High Availability	N	N	Y	N	N	N	N	N	<b>EE-ES</b> : Available on Oracle Database Appliance. Not available on Exadata.

**Table 1-4 (Cont.) High Availability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Data Guard—Redo Apply	N	Y	Y	N	Y	Y	Y	Y	
Oracle Data Guard—Far Sync Standby	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option
Oracle Data Guard—SQL Apply	N	Y	Y	N	Y	Y	Y	Y	
Oracle Data Guard—Snapshot Standby	N	Y	Y	N	Y	Y	Y	Y	
Oracle Data Guard—Real-Time Cascading Standbys	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option
Oracle Data Guard—Automatic Correction of Non-logged Blocks at a Data Guard Standby Database	N	N	Y	N	N	N	Y	Y	<b>EE-ES</b> : Requires the Oracle Active Data Guard option
Oracle Active Data Guard	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option <b>CLOUD</b> : Active Data Guard DML Redirection is only available in OCI
Rolling Upgrades—Patch Set, Database, and Operating System	N	Y	Y	N	Y	Y	Y	Y	
Rolling Upgrade Using Active Data Guard	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option
Online index rebuild	N	Y	Y	N	Y	Y	Y	Y	
Online table organization	N	Y	Y	N	Y	Y	Y	Y	ALTER TABLE ... MOVE ONLINE operations
Online table redefinition	N	Y	Y	N	Y	Y	Y	Y	Using the DBMS_REDEFINITION package
Duplexed backup sets	N	Y	Y	N	Y	Y	Y	Y	
Block change tracking for fast incremental backup	N	Y	Y	N	Y	Y	Y	Y	
Unused block compression in backups	N	Y	Y	N	Y	Y	Y	Y	
Block-level media recovery	N	Y	Y	N	Y	Y	Y	Y	
Lost Write Protection	N	Y	Y	N	Y	Y	Y	Y	
Automatic Block Repair	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option
Parallel backup and recovery	N	Y	Y	N	Y	Y	Y	Y	
Tablespace point-in-time recovery	N	Y	Y	N	Y	Y	Y	Y	

**Table 1-4 (Cont.) High Availability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Trial recovery	N	Y	Y	N	Y	Y	Y	Y	
Fast-start fault recovery	N	Y	Y	N	Y	Y	Y	Y	
Flashback Table	N	Y	Y	N	Y	Y	Y	Y	
Flashback Database	N	Y	Y	N	Y	Y	Y	Y	
Flashback Transaction	N	Y	Y	N	Y	Y	Y	Y	
Flashback Transaction Query	N	Y	Y	N	Y	Y	Y	Y	
Optimization for Flashback Time Travel (formerly Optimization for Flashback Data Archive)	N	Y	Y	N	N	Y	Y	Y	Basic Flashback Time Travel is in all offerings <b>EE</b> and <b>EE-ES</b> : Optimization for Flashback Time Travel requires the Oracle Advanced Compression option
Online Datafile Move	N	Y	Y	N	Y	Y	Y	Y	
Transaction Guard	N	Y	Y	N	Y	Y	Y	Y	
Cross-platform Backup and Recovery	N	Y	Y	N	Y	Y	Y	Y	
Global Data Services	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Active Data Guard option
Recovering tables and table partitions from RMAN backups	N	Y	Y	N	Y	Y	Y	Y	

**Table 1-5 Integration**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Database Gateways	Y	Y	Y	Y	Y	Y	Y	Y	Includes Database Gateway for ODBC All other Database Gateway products require a separate product license
Messaging Gateway	N	Y	Y	N	Y	Y	Y	Y	
AQ Sharded Queues	Y	Y	Y	Y	Y	Y	Y	Y	Includes a restricted use license for Oracle Partitioning. Refer to <a href="#">AQ Sharded Queues</a> in "Restricted Use Licenses" for more information.

**Table 1-6 Manageability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Cloud Management Pack for Oracle Database	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle Data Masking and Subsetting Pack	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle Database Lifecycle Management Pack for Oracle Database	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle Diagnostics Pack	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle Tuning Pack	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option, also requires Oracle Diagnostics Pack
Oracle Real Application Testing	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Database Resource Manager	N	Y	Y	N	Y	Y	Y	Y	
I/O Resource Management	N	N	Y	N	N	N	N	Y	
Instance Caging	Y	Y	Y	Y	Y	Y	Y	Y	

Table 1-6 (Cont.) Manageability

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
SQL Plan Management	Y	Y	Y	Y	Y	Y	Y	Y	<p>SQL Plan Management does not require a license for Oracle Diagnostics Pack or Oracle Tuning Pack</p> <p><b>SE2 and BaseDB SE Summary:</b> Only one SQL plan baseline per SQL statement is allowed and SQL plan evolution is disabled.</p> <p><b>SE2 and BaseDB SE Details:</b></p> <ol style="list-style-type: none"> <li>SQL plan baselines can be created or captured using the following methods: <ul style="list-style-type: none"> <li>Auto capture (OPTIMIZER_CAPTURE_SQL_PLAN_BASELINE=TRUE)</li> <li>Manual loading from the cursor cache (DBMS_SPM.LOAD_PLANS_FROM_CURSOR_CACHE)</li> <li>Migration from stored outlines (DBMS_SPM.MIGRATE_STORED_OUTLINE)</li> <li>Import using DBMS_SPM.UNPACK_STGTAB_BASELINE</li> </ul> </li> <li>All capture and creation methods store only one SQL plan baseline per SQL statement.</li> <li>SQL plan baselines can be exported and imported using DBMS_SPM.CREATE_STGTAB_BASELINE, DBMS_SPM.PACK_STGTAB_BASELINE, and DBMS_SPM.UNPACK_STGTAB_BASELINE.</li> <li>Unused SQL plan baselines are not auto-purged.</li> <li>Alternative SQL execution plans for SQL statements are not added to the SQL plan history.</li> <li>SQL plan baselines can be altered and dropped (DBMS_SPM.ALTER_SQL_PLA</li> </ol>



Table 1-6 (Cont.) Manageability

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
									N_BASELINE and DBMS_SPM.DROP_SQL_PLAN_BASELINE).
									7. The following DBMS_SPM functions and procedures are not allowed: CONFIGURE, LOAD_PLANS_FROM_AWR, LOAD_PLANS_FROM_SQLSET, and all functions and procedures associated with SQL plan evolution.
Automatic SQL Plan Management	N	Y	Y	N	Y	Y	Y	Y	<b>Note:</b> The licensing policy shown here applies to this feature starting with Oracle Database 19c, Release Update 19.22. In earlier versions of Oracle Database 19c, this feature is available only on Exadata on-premises systems and ExaDB.
SQL Tuning Sets	N	Y	Y	N	Y	Y	Y	Y	<b>EE and EE-ES:</b> SQL Tuning Sets can also be accessed by way of database server APIs and command-line interfaces. Usage of any subprograms in the DBMS_SQLSET package to manage SQL Tuning Sets is part of the EE and EE-ES offerings. In addition, the following subprograms, part of the DBMS_SQLTUNE package, provide an older interface to manage SQL Tuning Sets and are also part of the EE and EE-ES offerings: ADD_SQLSET_REFERENCE, CAPTURE_CURSOR_CACHE_SQLSET, CREATE_SQLSET, CREATE_STGTAB_SQLSET, DELETE_SQLSET, DROP_SQLSET, LOAD_SQLSET, PACK_STGTAB_SQLSET, REMOVE_SQLSET_REFERENCE, SELECT_CURSOR_CACHE, SELECT_SQLSET, SELECT_WORKLOAD_REPOSITORY, UNPACK_STGTAB_SQLSET, UPDATE_SQLSET.

**Table 1-6 (Cont.) Manageability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Fleet Patching and Provisioning (formerly Rapid Home Provisioning)	N	Y	Y	N/A	N/A	N/A	N/A	N/A	<b>EE</b> and <b>EE-ES</b> : When deployed across multiple clusters, each FPP-managed target must be licensed for one of the following: Oracle Database Lifecycle Management Pack, Oracle RAC, or Oracle RAC One Node

**Table 1-7 Networking**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
RDMA fabric	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
Oracle Connection Manager	N	Y	Y	N	Y	Y	Y	Y	Available via a custom install of the Oracle Database client, usually installed on a separate machine or compute instance
Network Compression	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Advanced Compression option

**Table 1-8 Performance**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Automatic Indexing	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
SQL Quarantine	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
Real-Time Statistics	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
High-Frequency Automatic Optimizer Statistics Collection	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
Client Side Query Cache	N	Y	Y	N	Y	Y	Y	Y	
Query Results Cache	N	Y	Y	N	Y	Y	Y	Y	
PL/SQL Function Result Cache	N	Y	Y	N	Y	Y	Y	Y	

**Table 1-8 (Cont.) Performance**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle TimesTen Application-Tier Database Cache	N	Y	Y	N	N	N	N	N	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Database Smart Flash Cache	N	Y	Y	N/A	N/A	N/A	N/A	N/A	<b>EE</b> : Solaris and Oracle Linux only <b>EE-ES</b> : Available on Oracle Database Appliance. Not available on Exadata
Support for Oracle Exadata Storage Server Software	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata. Not available on Oracle Database Appliance.
Adaptive Execution Plans	N	Y	Y	N	Y	Y	Y	Y	
Concurrent Execution of UNION and UNION ALL Branches	N	Y	Y	N	Y	Y	Y	Y	
Oracle Database In-Memory	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
In-Memory Column Cache on Storage Servers	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata and requires the Oracle Database In-Memory option. Not available on Oracle Database Appliance. Requires Exadata or Supercluster
In-Memory Column Store on Active Data Guard standby	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata and requires the Oracle Database In-Memory option and the Oracle Active Data Guard option. Not available on Oracle Database Appliance.
Fault Tolerant In-Memory Column Store	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata and Oracle Database Appliance. Requires the Oracle Database In-Memory option and the Oracle Real Application Clusters option. Requires Exadata, Supercluster, or Infiniband-based Oracle Database Appliance
Automatic In-Memory	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Database In-Memory option

Table 1-8 (Cont.) Performance

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
In-Memory Column Store support for External Tables	N	Y	Y	N	N	N	Y	Y	<b>EE and EE-ES:</b> Requires the Oracle Database In-Memory option <b>Note:</b> The licensing policy shown here applies to this feature starting with Oracle Database 19c, Release Update 19.12. In earlier versions of Oracle Database 19c, this feature is available only on Exadata on-premises systems (requires the Oracle Database In-Memory option) and ExaDB.
In-Memory Aggregation	N	Y	Y	N	N	N	Y	Y	<b>EE and EE-ES:</b> Requires the Oracle Database In-Memory option
Database In-Memory Base Level	N	Y	Y	N	N	N	Y	Y	Allows you to experiment with Oracle Database In-Memory features without purchasing the Oracle Database In-Memory option. The following restrictions apply: <ul style="list-style-type: none"> <li>The size of the In-Memory area (<code>INMEMORY_SIZE</code>) cannot exceed 16 GB for a CDB. In an Oracle RAC environment, the size is limited to 16 GB for each instance.</li> <li>The compression level for all objects and columns is automatically and transparently set to <code>QUERY LOW</code>.</li> <li>The Automatic In-Memory feature is disabled.</li> <li>In-Memory Column Store feature tracking is tracked for "In-Memory Base Level" rather than "In-Memory Column Store."</li> <li>The CellMemory feature is disabled for Oracle Exadata.</li> </ul> <b>CLOUD:</b> Only available in OCI
Memoptimized Rowstore	N	Y	Y	N	Y	Y	Y	Y	<b>Note:</b> The licensing policy shown here applies to this feature starting with Oracle Database 19c, Release Update 19.12. In earlier versions of Oracle Database 19c, this feature is available only on Exadata on-premises systems and ExaDB.

**Table 1-8 (Cont.) Performance**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Attribute Clustering	N	Y	Y	N	Y	Y	Y	Y	
Zone Maps	N	N	Y	N	N	N	N	Y	<b>EE-ES:</b> Available on Exadata and requires the Oracle Partitioning option. Not available on Oracle Database Appliance.

**Table 1-9 Scalability**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Real Application Clusters (Oracle RAC)	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES:</b> Extra cost option
Automatic Workload Management	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES:</b> Requires the Oracle Real Application Clusters option
Quality of Service Management	N	Y	Y	N	N	N	Y	Y	<b>EE</b> and <b>EE-ES:</b> Requires the Oracle RAC One Node option or the Oracle Real Application Clusters option
Oracle NoSQL Database Enterprise Edition	N	Y	Y	N/A	N/A	N/A	N/A	N/A	

**Table 1-10 Security**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Transparent Data Encryption (TDE) for Columns	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES:</b> Requires the Oracle Advanced Security option
Transparent Data Encryption (TDE) for Tablespaces	N	Y	Y	Y	Y	Y	Y	Y	<b>EE</b> and <b>EE-ES:</b> Requires the Oracle Advanced Security option
Oracle Advanced Security	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES:</b> Extra cost option
Oracle Database Vault	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES:</b> Extra cost option
Oracle Label Security	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES:</b> Extra cost option
Enterprise User Security	N	Y	Y	N	Y	Y	Y	Y	<b>EE, EE-ES, BaseDB EE, BaseDB EE-HP, BaseDB EE-EP,</b> and <b>ExaDB:</b> Enterprise User Security is a feature for directory-based management of database users. It requires a corresponding Oracle Identity Management Directory Services Plus to be licensed.

**Table 1-10 (Cont.) Security**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Centrally Managed Users	N	Y	Y	N	Y	Y	Y	Y	<b>EE, EE-ES, BaseDB EE, BaseDB EE-HP, BaseDB EE-EP, and ExaDB:</b> Centrally Managed Users is a feature for centrally authenticating and authorizing database users with Microsoft Active Directory.
Fine-grained Auditing	N	Y	Y	N	Y	Y	Y	Y	
Privilege Analysis	N	Y	Y	N	Y	Y	Y	Y	
Real Application Security	N	Y	Y	N	Y	Y	Y	Y	
Redaction	N	Y	Y	N	N	Y	Y	Y	<b>EE and EE-ES:</b> Requires the Oracle Advanced Security option
Transparent Sensitive Data Protection	N	Y	Y	N	Y	Y	Y	Y	
Virtual Private Database	N	Y	Y	N	Y	Y	Y	Y	
Keystore for Each Pluggable Database	N	Y	Y	N	Y	Y	Y	Y	<b>EE:</b> This feature is available starting with Oracle Database release 19c, Release Update 19.14, and requires the Oracle Advanced Security option. <b>EE-ES:</b> Requires the Oracle Advanced Security option <b>CLOUD:</b> Only available in OCI

**Table 1-11 Snapshots and Cloning**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Storage Snapshot Optimization	N	Y	Y	N/A	N/A	N/A	N/A	N/A	<b>EE and EE-ES:</b> Requires the Oracle Advanced Compression option

**Table 1-12 Spatial and Graph Data**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Spatial and Graph	Y	Y	Y	Y	Y	Y	Y	Y	Oracle Spatial and Graph no longer requires an extra cost license. See <a href="#">Oracle Database Insider blog post</a> for more information.

**Table 1-12 (Cont.) Spatial and Graph Data**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Property Graph and RDF Graph Technologies (RDF/OWL)	Y	Y	Y	Y	Y	Y	Y	Y	Property Graph and RDF Graph Technologies (RDF/OWL) no longer requires an extra cost license. See <a href="#">Oracle Database Insider blog post</a> for more information.
Parallel spatial index builds	N	Y	Y	N	Y	Y	Y	Y	
Partitioned spatial indexes	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Partitioning option

**Table 1-13 VLDB, Data Warehousing, and Business Intelligence**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Oracle Partitioning	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle On-Line Analytical Processing (OLAP)	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Oracle Machine Learning (formerly Advanced Analytics)	Y	Y	Y	Y	Y	Y	Y	Y	Oracle Machine Learning no longer requires an extra cost license. See <a href="#">Oracle Database Insider blog post</a> for more information.
Oracle Advanced Compression	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Extra cost option
Advanced Index Compression	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Advanced Compression option
Prefix Compression (also called Key Compression)	N	Y	Y	N	Y	Y	Y	Y	
Hybrid Columnar Compression	N	Y	Y	N	Y	Y	Y	Y	<b>EE</b> : Requires ZFS, Axiom, or FS1 storage
Row-Level Locking for Hybrid Columnar Compression	N	Y	Y	N	N	N	N	Y	<b>EE</b> : Requires ZFS or FS1 storage, and the Oracle Advanced Compression option <b>EE-ES</b> : Requires the Oracle Advanced Compression option
Exadata Flash Cache Compression	N	N	Y	N	N	N	N	Y	<b>EE-ES</b> : Available on Exadata and requires the Oracle Advanced Compression option. Not available on Oracle Database Appliance.
Heat Map	N	Y	Y	N	Y	Y	Y	Y	

**Table 1-13 (Cont.) VLDB, Data Warehousing, and Business Intelligence**

Feature / Option / Pack	SE2	EE	EE-ES	Base DB SE	Base DB EE	Base DB EE-HP	Base DB EE-EP	ExaDB	Notes
Automatic Data Optimization	N	Y	Y	N	N	Y	Y	Y	<b>EE</b> and <b>EE-ES</b> : Requires the Oracle Advanced Compression option or the Oracle Database In-Memory option
Basic Table Compression	N	Y	Y	N	Y	Y	Y	Y	
Deferred Segment Creation	N	Y	Y	N	Y	Y	Y	Y	
Bitmapped index, bitmapped join index, and bitmap plan conversions	N	Y	Y	N	Y	Y	Y	Y	
Parallel query/DML	N	Y	Y	N	Y	Y	Y	Y	
Parallel statistics gathering	N	Y	Y	N	Y	Y	Y	Y	
Parallel index build/scans	N	Y	Y	N	Y	Y	Y	Y	
Parallel Data Pump Export/Import	N	Y	Y	N	Y	Y	Y	Y	
In-memory Parallel Execution	N	Y	Y	N	Y	Y	Y	Y	
Parallel Statement Queuing	N	Y	Y	N	Y	Y	Y	Y	
Parallel capture and apply via XStream	N	Y	Y	N	Y	Y	Y	Y	
Transportable tablespaces, including cross-platform and full transportable export and import	N	Y	Y	N	Y	Y	Y	Y	Import of transportable tablespaces is supported from all offerings that include Enterprise Edition software into <b>SE2</b> ; this does not include the use of cross-platform capabilities.
Summary management —Materialized View Query Rewrite	N	Y	Y	N	Y	Y	Y	Y	

## 1.4 Oracle Database Options and Their Permitted Features

**Table 1-14** lists Oracle Database options, the Oracle Database offerings for which each option is available, and the features that are included with each option. You must be licensed for an option in order to use any of its features.



**Table 1-14 Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
Oracle Active Data Guard	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Active Data Guard includes the following features:</p> <ul style="list-style-type: none"> <li>Physical Standby with Real-time Query</li> <li>Fast Incremental Backup on Physical Standby</li> <li>Automatic Block Repair</li> <li>Active Data Guard Far Sync</li> <li>Global Data Services</li> <li>Real-Time Cascade</li> <li>Application Continuity</li> <li>Rolling Upgrade using Active Data Guard</li> <li>Active Data Guard DML Redirection (<b>CLOUD</b>: Active Data Guard DML Redirection is only available in OCI.)</li> </ul> <p>In an Oracle Data Guard configuration:</p> <ul style="list-style-type: none"> <li>Oracle Active Data Guard must be licensed on any standby databases with any of the above features in use, as well as the primary database. If there are additional standby databases in the Oracle Data Guard configuration that are not using any of the Oracle Active Data Guard features, those standby databases do not require an Oracle Active Data Guard license.</li> </ul> <p><b>Note:</b> For customers who back up standby databases to Zero Data Loss Recovery Appliance (ZDLRA) and wish to use the Fast Incremental Backup on Physical Standby or Real-Time Cascade feature, an Oracle Active Data Guard license is not required. Oracle Active Data Guard must still be licensed on standby databases, if any other of the above features are in use.</p> <ul style="list-style-type: none"> <li>The container root (CDB\$Root) of the standby database may be opened read-only without requiring an Oracle Active Data Guard license. An Oracle Active Data Guard license is only required if any of the pluggable databases in the standby is opened for read.</li> </ul>

**Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
Oracle Advanced Compression	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Advanced Compression includes the following features:</p> <ul style="list-style-type: none"> <li>Advanced Row Compression</li> <li>Advanced LOB Compression</li> <li>Advanced LOB Deduplication</li> <li>RMAN Backup Compression (<code>RMAN DEFAULT COMPRESS</code> does not require the Oracle Advanced Compression option)</li> <li>Data Pump Export Data Compression (<code>COMPRESSION=METADATA_ONLY</code> does not require the Oracle Advanced Compression option)</li> <li>Automatic Data Optimization</li> <li>Data Guard Redo Transport Compression</li> <li>Advanced Network Compression</li> <li>Optimization for Flashback Time Travel History Tables</li> <li>Storage Snapshot Optimization</li> <li>Online Move Partition (to any compressed format)</li> <li>Exadata Flash Cache Compression (This feature can be enabled only on Exadata storage servers, and all database processors that access the Exadata storage servers must be licensed for Oracle Advanced Compression.)</li> <li>Advanced Index Compression</li> <li>Row-Level Locking for Hybrid Columnar Compression (Requires Exadata, Oracle Database Appliance, Supercluster, ZFS, or FS1 storage)</li> </ul> <p><b>Note:</b> The use of Hybrid Columnar Compression without Row-Level Locking does not require a license for Oracle Advanced Compression.</p>
Oracle Advanced Security	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Advanced Security includes the following features:</p> <ul style="list-style-type: none"> <li>Transparent Data Encryption (TDE) for columns and tablespaces (including Oracle SecureFiles)</li> <li>DataPump Export File encryption</li> <li>RMAN backup encryption to disk</li> <li>Encrypted Database File System (DBFS)</li> <li>Data Redaction of sensitive data returned to applications (Full, Partial, Regular Expression, and Random techniques)</li> </ul> <p>Oracle Advanced Security includes a restricted use license for certain Oracle Enterprise Manager features. Refer to <a href="#">Oracle Advanced Security</a> in "Restricted Use Licenses" for more information.</p> <p><b>Note:</b> Network encryption (native network encryption, network data integrity, and SSL/TLS) and strong authentication services (Kerberos, PKI, and RADIUS) are no longer part of Oracle Advanced Security and are available in all licensed editions of all supported releases of Oracle Database.</p>
Oracle Database In-Memory	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Database In-Memory includes the following features:</p> <ul style="list-style-type: none"> <li>In-Memory Column Store</li> <li>In-Memory Column Cache on Storage Servers (Requires Exadata or Supercluster)</li> <li>Fault Tolerant In-Memory Column Store (Requires Exadata, Supercluster, or Infiniband-based Oracle Database Appliance)</li> <li>In-Memory Aggregation</li> <li>Automatic Data Optimization</li> </ul>

**Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
Oracle Database Vault	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Database Vault includes the following features:</p> <ul style="list-style-type: none"> <li>• Separation of Duties</li> <li>• Realms</li> <li>• Command Rules</li> <li>• Trusted Paths</li> </ul> <p>In an Oracle Multitenant environment, an Oracle Database Vault license is required when Oracle Database Vault is enabled in the CDB root, regardless of whether any PDBs are plugged in to the CDB root. An Oracle Database Vault license is not required when Oracle Database Vault is merely installed or configured in the CDB root. The Oracle Database Vault license applies to the entire CDB; you cannot license individual PDBs.</p> <p>When you purchase a license to use Oracle Database Vault on Oracle Database Enterprise Edition (<b>EE</b> or <b>EE-ES</b>), the licensing metrics for Oracle Database Vault must match the licensing metrics for Oracle Database Enterprise Edition.</p> <p>Oracle Database Vault includes special license rights for Oracle Label Security. Refer to <a href="#">Oracle Database Vault</a> in "Special License Rights" for more information.</p> <p>Oracle Database Vault includes a restricted use license for certain Oracle Enterprise Manager features. Refer to <a href="#">Oracle Database Vault</a> in "Restricted Use Licenses" for more information.</p>
Oracle Label Security	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Label Security includes the following features:</p> <ul style="list-style-type: none"> <li>• Label based access control (LBAC)</li> <li>• Multi-level security (MLS)</li> <li>• Label factors for Oracle Database Vault (Confidential, Sensitive)</li> <li>• User label authorizations (Confidential, Sensitive: PII)</li> <li>• Data labels (Sensitive: PII)</li> </ul> <p>In an Oracle Multitenant environment, an Oracle Label Security license is required when an Oracle Label Security policy is created in any container. An Oracle Label Security license is not required when Oracle Label Security is merely installed or enabled in any container. The Oracle Label Security license applies to the entire CDB; you cannot license individual PDBs.</p> <p>When you purchase a license to use Oracle Label Security on Oracle Database Enterprise Edition (<b>EE</b> or <b>EE-ES</b>), the licensing metrics for Oracle Label Security must match the licensing metrics for Oracle Database Enterprise Edition.</p> <p>Oracle Label Security includes a restricted use license for certain Oracle Enterprise Manager features. Refer to <a href="#">Oracle Label Security</a> in "Restricted Use Licenses" for more information.</p>
Oracle Multitenant	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p>Oracle Multitenant includes the following features:</p> <ul style="list-style-type: none"> <li>• For <b>EE</b> and <b>PE</b>, the ability to have up to 252 pluggable databases per multitenant container database</li> <li>• For <b>EE-ES</b>, <b>BaseDB EE-HP</b>, <b>BaseDB EE-EP</b>, and <b>ExaDB</b>, the ability to have up to 4096 pluggable databases per multitenant container database</li> </ul> <p><b>Note:</b> For licensing purposes, one non-CDB instance is equivalent to one user-created PDB inside one CDB.</p>

**Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
Oracle On-Line Analytical Processing (OLAP)	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	Oracle On-Line Analytical Processing (OLAP) includes the following features: <ul style="list-style-type: none"> <li>• OLAP Cube Definition, Storage, and Querying</li> <li>• OLAP API and Metadata</li> <li>• OLAP Cube Materialized Views</li> <li>• Analytic Workspaces</li> <li>• SQL Access to OLAP Cubes</li> </ul>
Oracle Partitioning	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b> , <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	These are some of the features that make use of Oracle Partitioning: <ul style="list-style-type: none"> <li>• Table Partitions and Subpartitions</li> <li>• Global and Local Index Partitions and Subpartitions</li> <li>• AQ Sharded Queues</li> <li>• Zone Maps (Available only on <b>EE-ES</b> and <b>ExaDB</b>; requires Exadata or Supercluster)</li> </ul>
Oracle RAC One Node	Extra cost option: <b>EE</b> , <b>EE-ES</b>	Oracle RAC One Node includes the following features: <ul style="list-style-type: none"> <li>• Database Cold Failover to another node in the cluster in case of server or instance failure</li> <li>• Online migration of the database instance to another server</li> <li>• Support for online rolling upgrades of the database, grid infrastructure, and OS homes</li> <li>• Online upgrade to Oracle Real Application Clusters</li> <li>• Policy-managed Server Pools</li> <li>• Quality of Service Management</li> <li>• Application Continuity</li> <li>• Zero-Downtime Oracle Grid Infrastructure Patching</li> </ul>
Oracle Real Application Clusters (Oracle RAC)	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>BaseDB EE-EP</b> , <b>ExaDB</b>	Oracle Real Application Clusters (Oracle RAC) includes the following features: <ul style="list-style-type: none"> <li>• All of the features included with Oracle RAC One Node</li> <li>• Real Application Clusters scaling to multiple servers</li> <li>• Connection Load Balancing</li> <li>• Fast Connection Failover</li> <li>• Hot Cluster Failover</li> </ul>

**Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
Oracle Real Application Testing	<p>Extra cost option: <b>EE, EE-ES</b></p> <p>Included option: <b>PE, BaseDB EE, BaseDB EE-HP, BaseDB EE-EP, ExaDB</b></p>	<p>Oracle Real Application Testing includes the following features:</p> <ul style="list-style-type: none"> <li>Database Replay</li> <li>SQL Performance Analyzer (SPA)</li> <li>Database Migration Planner</li> <li>Database Migration Workbench</li> </ul> <p><b>Database Replay</b></p> <ul style="list-style-type: none"> <li>The Oracle Real Application Testing license is required on both capture and replay systems for Database Replay and is charged by the total number of CPUs on those systems.</li> <li>Use of Capture and Replay ASH Analytics Reports, Compare Period ADDM Reports, and Replay Compare Period Reports also requires an Oracle Diagnostics Pack license.</li> <li>An Oracle Real Application Testing license permits you to access Database Replay functionality through Oracle Enterprise Manager, as well as through the following database server command-line APIs: <code>DBMS_WORKLOAD_CAPTURE</code> package and <code>DBMS_WORKLOAD_REPLAY</code> package. The use of the <code>DBMS_WORKLOAD_REPLAY.COMPARE_PERIOD_REPORT()</code> function also requires a license for Oracle Diagnostics Pack.</li> </ul> <p><b>SQL Performance Analyzer (SPA)</b></p> <p>An Oracle Real Application Testing license permits you to access SQL Performance Analyzer functionality through Oracle Enterprise Manager, as well as through the following database server command-line API: <code>DBMS_SQLPA</code> package, which is part of the Oracle Real Application Testing option.</p> <p><b>Database Migration Planner</b></p> <ul style="list-style-type: none"> <li>Database Migration Planner was renamed from Database Consolidation Workbench in Enterprise Manager Cloud Control 13.4.</li> <li>Database Migration Planner, introduced in Oracle Enterprise Manager Cloud Control 13c, provides a data-driven and systematic approach to consolidation by eliminating guess work and human errors.</li> <li>Use of the consolidation planning feature of Database Migration Planner requires an Oracle Diagnostics Pack license.</li> <li>An Oracle Real Application Testing license permits you to access the following links on the Database Migration Planner page in Oracle Enterprise Manager: <ul style="list-style-type: none"> <li>From the <b>Enterprise</b> menu, select <b>Migration and Consolidation</b>, then select <b>Database Migration Planner</b>.</li> <li>On the database target home page, select the <b>Administration</b> menu, then select <b>Database Migration Planner</b>.</li> <li>All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Planner.</li> </ul> </li> </ul> <p><b>Database Migration Workbench</b></p> <ul style="list-style-type: none"> <li>Database Migration Workbench, introduced in Oracle Enterprise Manager Cloud Control 13c Release 4, is a single workbench that integrates all needs for migration sizing and performance comparison.</li> <li>An Oracle Real Application Testing license permits you to access the following links on the Database Migration Workbench page in Oracle Enterprise Manager:</li> </ul>

**Table 1-14 (Cont.) Oracle Database Options and Their Permitted Features**

Option	Availability	Included Features
		<ul style="list-style-type: none"> <li>– From the <b>Enterprise</b> menu, select <b>Migration and Consolidation</b>, then select <b>Database Migration Workbench</b>.</li> <li>– All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Workbench.</li> </ul>
Oracle TimesTen Application-Tier Database Cache	Extra cost option: <b>EE</b> , <b>EE-ES</b> Included option: <b>PE</b>	Oracle TimesTen Application-Tier Database Cache includes the following features: <ul style="list-style-type: none"> <li>• Data access using PL/SQL, JDBC, ODBC, ttClasses, OCI, and Pro*C/C++ interfaces</li> <li>• Transaction Log API (XLA) for change notification</li> <li>• Multi-node Cache Grid</li> <li>• Automatic data synchronization with the Oracle database</li> <li>• Transactional replication between the in-memory cache databases</li> <li>• Automated failure detection and database failovers</li> <li>• TimesTen Extension for Oracle SQL Developer</li> <li>• TimesTen Plug-in for Oracle Enterprise Manager</li> </ul>

## 1.5 Oracle Management Packs and Their Permitted Features

[Table 1-15](#) lists Oracle management packs, the Oracle Database offerings for which each pack is available, and the features that are included with each pack. The features in these packs are accessible through Oracle Enterprise Manager, Desktop Widgets, and APIs provided with Oracle Database software. You must be licensed for a management pack in order to use any of its features.

**Table 1-15 Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
Oracle Cloud Management Pack for Oracle Database	<p>Extra cost pack: <b>EE</b>, <b>EE-ES</b></p> <p>Included pack: <b>BaseDB EE-HP</b>, <b>BaseDB EE-EP</b>, <b>ExaDB</b></p>	<p><b>Features:</b></p> <p>Oracle Cloud Management Pack for Oracle Database includes the following features:</p> <ul style="list-style-type: none"> <li>Database-as-a-Service comprising self-service database provisioning on physical or virtual infrastructure</li> <li>DBaaS Rapid Start Kit allowing users to set up and configure Enterprise Manager Cloud Control 12c in under a minute.</li> <li>Pluggable Database-as-a-Service (PDBaaS) providing self-service provisioning on a pool of multitenant container databases (CDBs).</li> <li>Support shared server, shared cluster, and shared database (Schema-as-a-Service) deployment models</li> <li>Virtual assembly provisioning. For example, if there is an assembly topology of three VMs (two WebLogic Server-managed servers and one database), you will need both packs to cover the respective tiers.</li> <li>Snap Clone, a fast, storage efficient way of cloning Oracle databases</li> <li>Full clones using RMAN backups</li> <li>Role based access and resource control through quotas and retirement policies</li> <li>Schedule- and performance-based resource management policies</li> <li>Metering and chargeback based on fixed cost, utilization metrics and configuration parameters of the database</li> <li>Programmatic access to the Self-Service Portal</li> <li>Blueprint driven orchestration of cloud operations</li> </ul> <p><b>Prerequisites:</b></p> <p>Oracle Cloud Management Pack for Oracle Database requires Oracle Database Lifecycle Management Pack for Oracle Database.</p> <p><b>Licensed Links:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Cloud Management Pack for Oracle Database.</p> <p>Starting on the Enterprise Summary home page, click the <b>Enterprise</b> menu. Select:</p> <ul style="list-style-type: none"> <li><b>Cloud</b>, then <b>Infrastructure Home</b></li> <li><b>Cloud</b>, then <b>Infrastructure Request Dashboard</b></li> <li><b>Cloud</b>, then <b>Infrastructure Policies</b></li> <li><b>Cloud</b>, then <b>Middleware and Database Home</b></li> <li><b>Cloud</b>, then <b>Middleware and Database Request Dashboard</b></li> <li><b>Cloud</b>, then <b>Self Service Portal</b></li> <li><b>Cloud</b>, then <b>Service Instances</b></li> <li><b>Chargeback</b></li> <li><b>Provisioning and Patching</b>, then <b>Database Provisioning</b>. In the Database Provisioning page, in the Related Links section of the left menu pane, click <b>Provision Pluggable Databases</b>. Next, from the PDB Operations section, select <b>Create New Pluggable Databases</b>. Click <b>Launch</b>, and from Pluggable Database Creation Options, select <b>Clone an Existing PDB -&gt; Snap Clone</b>.</li> </ul> <p>Starting on the Enterprise Summary home page, click the <b>Setup</b> menu. Select:</p> <ul style="list-style-type: none"> <li><b>Cloud</b>. Select <b>Infrastructure</b></li> <li><b>Cloud</b>. Select <b>Database</b></li> <li><b>Provisioning and Patching</b>, then <b>Storage Registration</b></li> </ul> <p>On the Multitenant container database's home page, from the Oracle Database menu, select <b>Provisioning</b>, then <b>Provision Pluggable</b></p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p><b>Database.</b> Next, from the PDB Operations section, select <b>Create New Pluggable Databases</b>. Click <b>Launch</b>, and from Pluggable Database Creation Options, select <b>Clone an Existing PDB -&gt; Snap Clone</b>.</p> <p><b>Licensed APIs:</b></p> <p>Use of the following APIs requires a license for Oracle Cloud Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>• <b>Assembly Operations</b> — Any POST/GET/PUT/DELETE on /em/cloud/iaas URI space for Resources Assembly Template and Assembly Instance</li> <li>• <b>DBaaS Operations</b> — Any POST/GET/PUT/DELETE on /em/cloud/dbaas URI space</li> <li>• <b>DBaaS Setup Operations</b> — Any POST/GET/PUT/DELETE on /em/websvcs/restful/extws/cloudservices/admin/cfw/v1 URI space.</li> </ul> <p><b>Licensed Command Line Interface (CLI) Verbs:</b></p> <p>The following Enterprise Manager Command Line Interface (CLI) verbs are licensed as part of Oracle Cloud Management Pack for Oracle Database. These verbs operate on a database pool.</p> <ul style="list-style-type: none"> <li>• add_pool_members</li> <li>• create_charge_item</li> <li>• create_dbaas_quota</li> <li>• create_dbprofile</li> <li>• create_pool</li> <li>• create_service_template</li> <li>• delete_charge_item</li> <li>• delete_dbaas_quota</li> <li>• delete_pool</li> <li>• delete_service_template</li> <li>• get_dbaas_quota</li> <li>• get_dbaas_request_settings</li> <li>• get_metering_data</li> <li>• get_pool_capacity_data</li> <li>• get_pool_capacity_summary_data</li> <li>• get_pool_constraints</li> <li>• get_pool_criteria</li> <li>• get_pool_detail</li> <li>• get_pool_instance_data</li> <li>• get_pool_target_type</li> <li>• get_pools</li> <li>• get_service_template</li> <li>• list_charge_item_candidates</li> <li>• remove_pool_members</li> <li>• update_dbaas_quota</li> <li>• update_dbaas_request_settings</li> <li>• update_pool</li> </ul> <p><b>Licensed Views and Tables:</b></p> <p>The following objects within the repository schema are licensed under Oracle Cloud Management Pack for Oracle Database:</p>



**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>• Tables starting with EMCT_CBA</li> <li>• Views starting with EMCT\$CBA</li> <li>• The GP_EMCT_CBA_TARGET_CHARGE views</li> <li>• The MGMT\$EMCT_CBA_CHARGE_DAILY view</li> <li>• The MGMT\$EMCT_CBA_CHARGE_HOURLY view</li> </ul> <p><b>Licensed Chargeback Reports:</b></p> <p>The following BI Publisher reports are licensed under Oracle Cloud Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>• Charge Trend Report</li> <li>• Charge Summary Report</li> <li>• Usage Trend Report</li> <li>• Usage Summary Report</li> </ul> <p>Also, any report created using the "create-like" feature of BI publisher referring the preceding reports, falls under this license.</p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
Oracle Data Masking and Subsetting Pack	<p>Extra cost pack: <b>EE, EE-ES</b></p> <p>Included pack: <b>BaseDB EE, BaseDB EE-HP, BaseDB EE-EP, ExaDB</b></p>	<p><b>Features:</b></p> <p>Oracle Data Masking and Subsetting Pack includes the following features:</p> <ul style="list-style-type: none"> <li>• Application Data Modeling</li> <li>• Data Masking Formats Library</li> <li>• Data Masking Definitions</li> <li>• Data Subsetting Definitions</li> <li>• Application Data Modeling, Data Masking and Subsetting Enterprise Manager Command Line Interface (CLI) verbs</li> <li>• Application Data Modeling accelerator for select versions of Oracle E-Business Suite</li> <li>• Application Data Modeling accelerator for select versions of Oracle Fusion Applications</li> <li>• Data Masking templates for select versions of Oracle Fusion Applications</li> <li>• Data Masking templates for select versions of Oracle E-Business Suite</li> </ul> <p>Oracle Data Masking and Subsetting Pack includes the following restricted use licenses:</p> <ul style="list-style-type: none"> <li>• Database Gateway for APPC</li> <li>• Database Gateway for DRDA</li> <li>• Database Gateway for Informix</li> <li>• Database Gateway for SQLServer</li> <li>• Database Gateway for Sybase</li> <li>• Database Gateway for Teradata</li> </ul> <p>If you want to use the Oracle Database Gateways listed above not solely for the purposes of Oracle Data Masking and Subsetting Pack, then you must purchase full-use licenses for the Oracle Database Gateways. When using Oracle Data Masking and Subsetting Pack for non-Oracle databases, the Oracle Database Gateways stage the data in a separately licensed Oracle Database. Oracle Data Masking and Subsetting functionality cannot be executed directly against the non-Oracle database.</p> <p>Oracle Data Masking and Subsetting Pack must be licensed only for the source database server, i.e., the databases from which the data originates.</p> <p>There is no requirement to license the pack for the staging database server on which masking and subsetting operations are executed, or for copies made of the masked database.</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. Oracle Data Masking and Subsetting Pack incorporates the previous Oracle Data Masking Pack, Oracle Test Data Management Pack, and Oracle Data Masking and Subsetting Pack for non-Oracle Databases.</li> <li>2. Application Data Modeling was previously called Data Discovery and Modeling.</li> </ol> <p><b>Licensed Links:</b></p> <p>All features, functions, links, buttons, and drill-downs on these Oracle Enterprise Manager menus are licensed as part of the Oracle Data Masking and Subsetting Pack.</p> <p>Starting on the Enterprise Summary home page, click the <b>Enterprise</b> menu, then <b>Quality Management</b>, then select:</p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>• <b>Application Data Modeling</b></li> <li>• <b>Data Masking Definitions</b></li> <li>• <b>Data Masking Formats</b></li> <li>• <b>Data Subset Definitions</b></li> </ul> <p>From the Oracle database or cluster database target home page, click the <b>Security</b> menu, then select:</p> <ul style="list-style-type: none"> <li>• <b>Application Data Modeling</b></li> <li>• <b>Data Masking Definitions</b></li> <li>• <b>Data Subsetting</b></li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
Oracle Database Lifecycle Management Pack for Oracle Database	Extra cost pack: <b>EE</b> , <b>EE-ES</b> Included pack: <b>BaseDB EE-HP</b> , <b>BaseDB EE-EP</b> , <b>ExaDB</b>	<p><b>Features:</b></p> <p>Oracle Database Lifecycle Management Pack for Oracle Database includes the following features:</p> <ul style="list-style-type: none"> <li>• Change Activity Plans</li> <li>• Client system analyzer</li> <li>• Compliance</li> <li>• Configuration Collection Extensibility</li> <li>• Configuration Compare</li> <li>• Configuration History</li> <li>• Configuration Instance Browser</li> <li>• Configuration Save</li> <li>• Configuration Search</li> <li>• Configuration Topology</li> <li>• Copy Objects</li> <li>• Database Patching</li> <li>• Database Provisioning</li> <li>• Database Upgrade</li> <li>• Disaster Recovery via Site Guard</li> <li>• Enterprise Data Governance</li> <li>• File Synchronization</li> <li>• Notifications</li> <li>• Pluggable Database (PDB) Clone</li> <li>• PDB Create/Plug/Unplug (Multiple target operations or performed using a customized deployment procedure.)</li> <li>• PDB Migrate</li> <li>• RAC Scale Back</li> <li>• RAC Scale Out</li> <li>• Real-time configuration change detection</li> <li>• Real-time schema change detection</li> <li>• Schema and Data Comparisons</li> <li>• Schema and Data Synchronization</li> <li>• Schema Change Plans</li> <li>• Schema Comparisons</li> <li>• User Defined Deployment Procedures (UDDP)</li> </ul> <p>With the purchase of Oracle Database Lifecycle Management Pack for Oracle Database, you also are entitled to the features described in the following sections. These features are restricted to the Oracle Database targets in the Oracle Database Home and the Platform (hardware and operating system) for the CPUs you have licensed.</p> <ul style="list-style-type: none"> <li>• Application Configuration Console</li> <li>• The <code>oplan</code> Utility (The basic OPlan feature is free for everyone that has an Oracle Support contract. Use of OPlan metadata to drive orchestration logic from either Enterprise Manager or custom/third-party scripts is part of Oracle Database Lifecycle Management Pack for Oracle Database.)</li> <li>• Migrate to ASM</li> <li>• Self Update</li> </ul> <p><b>Licensed Parameters:</b></p> <p>The <code>init.ora</code> parameter <code>ENABLE_DDL_LOGGING</code> is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database when set to <code>TRUE</code>. When set to <code>TRUE</code>, the database reports schema changes in</p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p>real time into the database alert log under the message group schema_ddl. The default setting is FALSE.</p> <p><b>Licensed Links:</b></p> <p>The Licensed Links, features, and functions listed in the following sections apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management on non-Oracle Database targets, you must purchase the appropriate management pack.</p> <p><b>Licensed Links – Database Provisioning Procedures:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Procedure Library</b>. All Procedures that Clone and Provision a Database are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Database Provisioning</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Oracle database or cluster database target home page, click the Oracle Database menu, then <b>Provisioning</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Database Upgrade:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Procedure Library</b>. All Procedures that Upgrade a Database are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Oracle database or cluster database target home page, click the Oracle Database menu, then <b>Provisioning</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – User Defined Deployment Procedures (UDDP)</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Procedure Library</b>. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – RAC Scale Out and Scale Back</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Procedure Library</b>. All</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p>Procedures that Extend or Scale a database or RAC are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Database Provisioning</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Oracle cluster database target home page, click the Oracle Database menu, then <b>Provisioning</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Database Patching</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, <b>Provisioning and Patching</b>, then <b>Procedure Library</b>. All Procedures that patch a database, Clusterware or Real Application Clusters are licensed with Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Offline Patching</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Setup</b> menu, <b>Provisioning and Patching</b>, then <b>Offline Patching</b>. From the Online and Offline Setting tab, the <b>Connection</b>, <b>Offline</b> setting is licensed with Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Configuration Instance Browser</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets</b>, <b>Databases</b>, and select a Database. From the database home page, click on <b>Oracle Database</b>, <b>Configuration</b>. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the database home page, click on <b>Oracle Database</b>, <b>Configuration</b>. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Configuration Search</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, then <b>Configuration and Search</b>. All features, functions, links,</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p>buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</p> <p><b>Licensed Links – Configuration History</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, then <b>Configuration and History</b>. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Configuration Compare</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, then <b>Configuration and Compare</b>. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Configuration Save</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, then <b>Configuration and Save</b>. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Configuration Topology</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Target Home Page, click on <b>Oracle Database, Configuration, Topology</b>. In the View Dropdown, Used By is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Target Home Page, click on <b>Oracle Database, Configuration, Topology, Customization</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the Target Home Page, click on <b>Oracle Database, Configuration, Topology</b>. In the View drop-down, Used By is licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>From the Target Home Page, click on <b>Oracle Database, Configuration, Topology, Customization</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Configuration Collection Extensibility</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu, then <b>Configuration and Custom</b>. All features, functions,</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p>links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</p> <p><b>Licensed Links – File Synchronization</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>When viewing comparison results differences as described in the Configuration Compare feature, select the configuration specification in the tree on the left. Select <b>Enable File Synchronization</b>. All features, functions, links, buttons, and drill-downs on this page are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Schema Comparison:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets, Databases</b>, and then select a Database. From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Schema and Data Comparisons:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets, Databases</b>, and then select a Database. From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Schema and Data Synchronization:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets, Databases</b>, and then select a Database. From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths:</li> </ul>



**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Links – Copy Objects:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets, Databases</b>, and then select a Database. From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Real-Time Schema Change Detection:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click on <b>Targets, Databases</b>, and then select a Database. From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> <li>If the Target Home Page is accessed directly or by other paths: <ul style="list-style-type: none"> <li>From the database home page, click on <b>Schema, Change Management</b>. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> </li> </ul> <p><b>Licensed Links – Real-time Configuration Change Detection and Compliance:</b></p> <p>Use of the following Oracle Enterprise Manager pages and links requires a license for Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>From the Enterprise Manager home page, click the <b>Enterprise</b> menu and <b>Compliance</b>. All features, functions, links, buttons, and drill-downs associated with the Library, Results and Real-Time Observations pages are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</li> </ul> <p><b>Licensed Reports:</b></p> <p>The following reports are part of Oracle Database Lifecycle Management Pack for Oracle Database. All reports in each of these sections are licensed as part of this pack. To access the reports go to the Enterprise Manager home page, click the Reports, Information Publisher Reports or BI Publisher Enterprise Reports.</p> <p>The following reporting areas, reports, and sub-reports under Information Publisher Reports are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database:</p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>• Compliance</li> <li>• Deployment and Configuration</li> <li>• Sample Host reports, Configuration Reports</li> <li>• Security</li> </ul> <p>The following reporting areas, reports and sub-reports under BI Publisher Enterprise Reports are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>• Compliance</li> <li>• Deployment and Configuration</li> <li>• Sample Host reports, Configuration Reports</li> <li>• Security</li> </ul> <p><b>Licensed Command Line Interface (CLI) Verbs:</b></p> <p>The following Enterprise Manager Command Line Interface (CLI) verbs are licensed as part of Oracle Database Lifecycle Management Pack for Oracle Database.</p> <ul style="list-style-type: none"> <li>• <code>associate_cs_targets</code></li> <li>• <code>clone_database</code></li> <li>• <code>config_compare</code></li> <li>• <code>config_db_service_target</code></li> <li>• <code>configure_log_archive_locations</code></li> <li>• <code>confirm_instance</code></li> <li>• <code>create_database</code></li> <li>• <code>describe_instance</code></li> <li>• <code>describe_procedure_input</code></li> <li>• <code>disable_config_history</code></li> <li>• <code>enable_config_history</code></li> <li>• <code>export_compliance_group</code></li> <li>• <code>export_compliance_standard_rule</code></li> <li>• <code>export_facet</code></li> <li>• <code>export_standard</code></li> <li>• <code>fix_compliance_state</code></li> <li>• <code>get_config_searches</code></li> <li>• <code>get_config_templates</code></li> <li>• <code>get_executions</code></li> <li>• <code>get_instance_data</code></li> <li>• <code>get_instance_status</code></li> <li>• <code>get_instances</code></li> <li>• <code>get_oms_config_property</code></li> <li>• <code>get_procedure_types</code></li> <li>• <code>get_procedure_xml</code></li> <li>• <code>get_procedures</code></li> <li>• <code>get_retry_argument</code></li> <li>• <code>get_saved_configs</code></li> <li>• <code>ignore_instance</code></li> <li>• <code>import_compliance_object</code></li> <li>• <code>list_oms_config_properties</code></li> <li>• <code>remove_cs_target_association</code></li> <li>• <code>reschedule_instance</code></li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>• resume_instance</li> <li>• run_config_search</li> <li>• save_procedure</li> <li>• set_config_history_retention_period</li> <li>• stop_instance</li> <li>• submit_procedure</li> <li>• suspend_instance</li> <li>• update_and_retry_step</li> <li>• update_procedure_input</li> <li>• upgrade_database</li> </ul> <p><b>Licensed Repository Views – Compliance Views:</b></p> <p>The following compliance views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>• MGMT\$CCC_ALL_OBS_BUNDLES</li> <li>• MGMT\$CCC_ALL_OBSERVATIONS</li> <li>• MGMT\$CCC_DIAG_ANALYTICS</li> <li>• MGMT\$CCC_DIAG_QUEUEBACKLOG</li> <li>• MGMT\$COMPLIANCE_STANDARD</li> <li>• MGMT\$COMPLIANCE_STANDARD_GROUP</li> <li>• MGMT\$COMPLIANCE_STANDARD_RULE</li> <li>• MGMT\$COMPOSITE_CS_EVAL_SUMMARY</li> <li>• MGMT\$CS_ASM_DISKGRP_SETTINGS</li> <li>• MGMT\$CS_DB_CONTROL_FILE_COUNT</li> <li>• MGMT\$CS_DB_INIT_PARAMS</li> <li>• MGMT\$CS_DB_RBS_IN_SYSTEM</li> <li>• MGMT\$CS_DB_REC_SEG_SETTINGS</li> <li>• MGMT\$CS_DB_REC_TS_SETTINGS</li> <li>• MGMT\$CS_DB_REC_USER_SETTINGS</li> <li>• MGMT\$CS_DB_REDO_LOG_COUNT</li> <li>• MGMT\$CS_DB_REDO_LOGS</li> <li>• MGMT\$CS_DB_TABLESPACES</li> <li>• MGMT\$CS_DB_TBSP_SEGSPACE_MGMT</li> <li>• MGMT\$CS_EVAL_SUMMARY</li> <li>• MGMT\$CS_FEATURE_USAGE</li> <li>• MGMT\$CS_GROUP_EVAL_SUMMARY</li> <li>• MGMT\$CS_GROUP_KEYWORD</li> <li>• MGMT\$CS_HA_INFO</li> <li>• MGMT\$CS_HIERARCHY</li> <li>• MGMT\$CS_KEYWORD</li> <li>• MGMT\$CS_RQS_HIERARCHY</li> <li>• MGMT\$CS_RULE_ATTRS</li> <li>• MGMT\$CS_RULE_EVAL_SUMMARY</li> <li>• MGMT\$CS_RULEFOLDER</li> <li>• MGMT\$CS_TARGET_ASSOC</li> <li>• MGMT\$CS_TGT_ASSOC_TXF_REQ</li> <li>• MGMT\$CSG_HIERARCHY</li> <li>• MGMT\$CSG_SUBGROUP</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>MGMT\$CSR_CURRENT_VIOLATION</li> <li>MGMT\$CSR_TARGET_ASSOC</li> <li>MGMT\$CSR_VIOLATION_CONTEXT</li> <li>MGMT\$CSRF_TARGET_ASSOC</li> <li>MGMT\$EM_CS_RULE_EVENT_ERROR</li> <li>MGMT\$EM_RULE_VIOL_CTXT_DEF</li> <li>MGMT\$ICS_TARGET_ASSOC</li> <li>MGMT\$REPO_RULE_CHK_DETAILS</li> <li>MGMT\$REPOSITORY_RULE_BIND_VARS</li> <li>MGMT\$REPOSITORY_RULE_PARAMS</li> <li>MGMT\$RULE_KEYWORD</li> </ul> <p><b>Licensed Repository Views – Provisioning and Patching Views:</b> The following provisioning and patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>EM\$PROV_APPTYPES</li> <li>EM\$PROVAPP_METADATA</li> <li>EM\$PROVAPP_METADATA_VERSION</li> <li>EM\$PROVAPP_TAG_PROPERTIES</li> <li>EM\$PROVAPP_TAGS</li> <li>MGMT\$PA_RECOM_METRIC_SOURCE</li> </ul> <p><b>Licensed Repository Views – Patching Views:</b> The following patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>GC\$EM_PC_PLAN_PATCHES</li> <li>GC\$EM_PC_PLANS</li> <li>GC\$EM_PC_PLAN_TARGETS</li> <li>GC_PC_EXECUTION_INSTANCES</li> <li>GC_PC_PLAN_ANALYSIS_RS</li> <li>GC_PC_PLAN_REMEDY</li> <li>GC_PC_PLAN_REMEDY_DETAILS</li> <li>GC_PC_PLAN_USERS</li> <li>GC_PC_TARGETS</li> <li>MGMT\$APPLIED_PATCHES</li> <li>MGMT\$APPLIED_PATCHSETS</li> <li>MGMT\$ARU_FAMILY_PRODUCT_MAP</li> <li>MGMT\$ARU_LANGUAGES</li> <li>MGMT\$ARU_PATCH_RECOMMENDATIONS</li> <li>MGMT\$ARU_PLATFORMS</li> <li>MGMT\$ARU_PRODUCT_RELEASE_MAP</li> <li>MGMT\$ARU_PRODUCTS</li> <li>MGMT\$ARU_RELEASES</li> <li>MGMT\$ARU_TARGETS</li> <li>MGMT\$PA_AFFTED_HOST_GUID_OH</li> <li>MGMT\$PA_AFFTED_HOST_OH</li> <li>MGMT\$PA_AFFTED_TARGETS</li> <li>MGMT\$PA_FINAL_PATCH_LIST</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>MGMT\$PA_TARGET_MAPPING</li> <li>MGMT\$PR_APPL_PATCHES_TO_OH</li> <li>MGMT\$PR_APPL_PATCHES_TO_OH_TGT</li> <li>MGMT\$PR_HOME_INFO</li> <li>MGMT\$PR_HOMES_AFFECTED_COUNT</li> <li>MGMT\$RECOM_METRIC_SOURCE</li> </ul> <p><b>Licensed Repository Views – Configuration Views:</b> The following configuration views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>GC\$ECM_COMP_PROPERTIES</li> <li>GC\$ECM_CONFIG_SUMMARY</li> <li>GC\$ECM_CURR_CONFIG</li> <li>GC\$ECM_CURR_CONFIG_FLAT_MEMS</li> <li>GC\$ECM_CURR_CONFIG_SNAPSHOTS</li> <li>GC\$ECM_CURR_TARGET_SNAPSHOTS</li> <li>GC\$ECM_DATA_RETENTION_TIME</li> <li>GC\$ECM_GEN_SNAPSHOT</li> <li>GC\$ECM_SAVED_CONFIG</li> <li>GC\$ECM_SAVED_CONFIG_FLAT_MEMS</li> <li>GC\$ECM_SAVED_CONFIG_SNAPSHOTS</li> <li>GC\$ECM_SAVED_CONFIG_TARGETS</li> <li>GC\$ECM_SAVED_TARGET_SNAPSHOTS</li> <li>MGMT\$CCS_DATA</li> <li>MGMT\$CCS_DATA_SOURCE</li> <li>MGMT\$CCS_DATA_SOURCE_VISIBLE</li> <li>MGMT\$CCS_DATA_VISIBLE</li> <li>MGMT\$DB_CONTROLFILES</li> <li>MGMT\$DB_DATAFILES</li> <li>MGMT\$DB_DBNINSTANCEINFO</li> <li>MGMT\$DB_FEATUREUSAGE</li> <li>MGMT\$DB_INIT_PARAMS</li> <li>MGMT\$DB_LICENSE</li> <li>MGMT\$DB_OPTIONS</li> <li>MGMT\$DB_REDOLOGS</li> <li>MGMT\$DB_ROLLBACK_SEGS</li> <li>MGMT\$DB_SGA</li> <li>MGMT\$DB_TABLESPACES</li> <li>MGMT\$DB_TABLESPACES_ALL</li> <li>MGMT\$ECM_CMP_JOB_LAST_RESULTS</li> <li>MGMT\$ECM_CMP_JOBS</li> <li>MGMT\$ECM_CMP_RPT_CCS_DS</li> <li>MGMT\$ECM_CMP_RPT_CCS_DS_DTLS</li> <li>MGMT\$ECM_CMP_RPT_CCS_PD_ALL</li> <li>MGMT\$ECM_CMP_RPT_CCS_PD_DIFFS</li> <li>MGMT\$ECM_CMP_RPT_CI_DIFFS</li> <li>MGMT\$ECM_CMP_VISIBLE_CONFIGS</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>MGMT\$ECM_CURRENT_SNAPSHOTS</li> <li>MGMT\$ECM_VISIBLE_SNAPSHOTS</li> <li>MGMT\$SERVICETAG_INSTANCES</li> <li>MGMT\$SERVICETAG_REGISTRY</li> <li>MGMT\$UNPATCHABLE_DB_TARGETS</li> </ul> <p><b>Licensed Repository Views – Oracle Home Patching Views:</b></p> <p>The following Oracle home patching views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>MGMT\$APPLIED_PATCHES</li> <li>MGMT\$APPLIED_PATCHSETS</li> <li>MGMT\$APPL_PATCH_AND_PATCHSET</li> <li>MGMT\$CPF_ADVISORY_INFO</li> <li>MGMT\$CPF_HOMES_INFO</li> <li>MGMT\$CPF_PATCH_INFO</li> <li>MGMT\$EM_HOMES_PLATFORM</li> <li>MGMT\$HOMES_AFFECTED</li> <li>MGMT\$OH_CLONE_PROPERTIES</li> <li>MGMT\$OH_COMP_DEP_RULE</li> <li>MGMT\$OH_COMP_INST_TYPE</li> <li>MGMT\$OH_COMPONENT</li> <li>MGMT\$OH_CRS_NODES</li> <li>MGMT\$OH_DEP_HOMES</li> <li>MGMT\$OH_FILE</li> <li>MGMT\$OH_HOME_INFO</li> <li>MGMT\$OH_INSTALLED_TARGETS</li> <li>MGMT\$OH_INV_SUMMARY</li> <li>MGMT\$OH_PATCH</li> <li>MGMT\$OH_PATCHED_COMPONENT</li> <li>MGMT\$OH_PATCHED_FILE</li> <li>MGMT\$OH_PATCH_FIXED_BUG</li> <li>MGMT\$OH_PATCHSET</li> <li>MGMT\$OH_VERSIONED_PATCHV</li> <li>MGMT\$PATCH_ADVISORIES</li> </ul> <p><b>Licensed Repository Views – Security Views:</b></p> <p>The following security views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>MGMT\$ESA_ALL_PRIVS_REPORT</li> <li>MGMT\$ESA_ANY_DICT_REPORT</li> <li>MGMT\$ESA_ANY_PRIV_REPORT</li> <li>MGMT\$ESA_AUDIT_SYSTEM_REPORT</li> <li>MGMT\$ESA_BECOME_USER_REPORT</li> <li>MGMT\$ESA_CATALOG_REPORT</li> <li>MGMT\$ESA_CONN_PRIV_REPORT</li> <li>MGMT\$ESA_CREATE_PRIV_REPORT</li> <li>MGMT\$ESA_DBA_GROUP_REPORT</li> <li>MGMT\$ESA_DBA_ROLE_REPORT</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>• MGMT\$ESA_DIRECT_PRIV_REPORT</li> <li>• MGMT\$ESA_EXMPT_ACCESS_REPORT</li> <li>• MGMT\$ESA_KEY_OBJECTS_REPORT</li> <li>• MGMT\$ESA_OH_OWNERSHIP_REPORT</li> <li>• MGMT\$ESA_OH_PERMISSION_REPORT</li> <li>• MGMT\$ESA_POWER_PRIV_REPORT</li> <li>• MGMT\$ESA_PUB_PRIV_REPORT</li> <li>• MGMT\$ESA_SYS_PUB_PKG_REPORT</li> <li>• MGMT\$ESA_TABSP_OWNERS_REPORT</li> <li>• MGMT\$ESA_TRC_AUD_PERM_REPORT</li> <li>• MGMT\$ESA_WITH_ADMIN_REPORT</li> <li>• MGMT\$ESA_WITH_GRANT_REPORT</li> </ul> <p><b>Licensed Repository Views – Client Configuration Views:</b></p> <p>The following client configuration views within the repository schema are licensed under Oracle Database Lifecycle Management Pack for Oracle Database:</p> <ul style="list-style-type: none"> <li>• MGMT\$CSA_COLLECTIONS</li> <li>• MGMT\$CSA_FAILED</li> <li>• MGMT\$CSA_HOST_COOKIES</li> <li>• MGMT\$CSA_HOST_CPUS</li> <li>• MGMT\$CSA_HOST_CUSTOM</li> <li>• MGMT\$CSA_HOST_IOCARDS</li> <li>• MGMT\$CSA_HOST_NICS</li> <li>• MGMT\$CSA_HOST_OS_COMPONENTS</li> <li>• MGMT\$CSA_HOST_OS_FILESYSTEMS</li> <li>• MGMT\$CSA_HOST_OS_PROPERTIES</li> <li>• MGMT\$CSA_HOST_RULES</li> <li>• MGMT\$CSA_HOST_SW</li> <li>• MGMT\$ECM_CONFIG_HISTORY</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
Oracle Diagnostics Pack	<p>Extra cost pack: <b>EE, EE-ES</b></p> <p>Included pack: <b>BaseDB EE, BaseDB EE-HP, BaseDB EE-EP, ExaDB</b></p>	<p><b>Features:</b></p> <p>Oracle Diagnostics Pack includes the following features:</p> <ul style="list-style-type: none"> <li>• Performance monitoring and diagnostics (database and host)</li> <li>• Automatic Workload Repository (AWR)</li> <li>• AWR Warehouse</li> <li>• Automatic Database Diagnostic Monitor (ADDM)</li> <li>• Compare Period ADDM</li> <li>• Real Time ADDM</li> <li>• ADDM Spotlight</li> <li>• Active Session History (ASH)</li> <li>• ASH analytics</li> <li>• Performance Hub</li> <li>• Top Activity Lite</li> <li>• Exadata Cell Grid Administration</li> <li>• Exadata Cell Grid Performance</li> <li>• Exadata Cell Group Health Overview page</li> <li>• Exadata Resource Utilization</li> <li>• Blackouts</li> <li>• Notifications</li> <li>• Metric and Alert/Event history</li> <li>• User-Defined Metrics and Metric Extensions</li> <li>• Management Connectors</li> <li>• Dynamic metric baselines and Adaptive metric thresholds</li> <li>• Monitoring templates and Template Collections</li> <li>• Replay Compare Period Report</li> <li>• Supporting functionality to perform per stream bottleneck detection and per component top wait event analysis</li> </ul> <p>In order to use the features listed above, you must purchase licenses for Oracle Diagnostics Pack. A new initialization parameter, <code>CONTROL_MANAGEMENT_PACK_ACCESS</code>, controls access to Oracle Diagnostics Pack and Oracle Tuning Pack. This parameter can be set to one of three values:</p> <ul style="list-style-type: none"> <li>• <code>DIAGNOSTIC+TUNING</code>: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is enabled in the database server.</li> <li>• <code>DIAGNOSTIC</code>: Only Oracle Diagnostics Pack functionality is enabled in the server.</li> <li>• <code>NONE</code>: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server.</li> </ul> <p>Any and all methods of accessing Oracle Diagnostics Pack functionality, whether through Enterprise Manager Console, Desktop Widgets, command-line APIs, or direct access to the underlying data, requires an Oracle Diagnostics Pack license.</p> <p><b>Licensed Links:</b></p> <p>To determine which links in Enterprise Manager are part of Oracle Diagnostics Pack, click the <b>Setup</b> link on the top right-hand part of the Enterprise Manager Home page.</p> <ul style="list-style-type: none"> <li>• When you click the <b>Setup</b> link, the navigation bar contains the <b>Management Pack Access</b> link. Click this link.</li> <li>• This will take you to the <b>Management Pack Access</b> page, which allows you to grant and remove access from all the management packs.</li> </ul>



**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"> <li>For Enterprise Manager Database Control, click the <b>Remove Access</b> radio button for the Diagnostics Pack and click <b>Apply</b>.</li> <li>For Enterprise Manager Cloud Control, click the appropriate check box for the Diagnostics Pack and click <b>Apply</b>.</li> </ul> <p>This procedure disables all the links and tabs associated with Oracle Diagnostics Pack in Enterprise Manager. All the disabled links and tabs are part of Oracle Diagnostics Pack and therefore require a pack license.</p> <p><b>Licensed Command-Line APIs:</b></p> <p>Oracle Diagnostics Pack features can also be accessed by way of database server APIs and command-line interfaces:</p> <ul style="list-style-type: none"> <li>The DBMS_ADDM, DBMS_PERF, DBMS_UMF, and DBMS_WORKLOAD_REPOSITORY packages are part of this pack.</li> <li>The DBMS_ADVISOR package is part of this pack if you specify ADDM as the value of the advisor_name parameter, or if you specify for the value of the task_name parameter any value starting with the ADDM prefix.</li> <li>The DBMS_WORKLOAD_REPLAY.COMPARE_PERIOD_REPORT function is part of this pack.</li> <li>The V\$ACTIVE_SESSION_HISTORY dynamic performance view and its underlying table, X\$ASH, are part of this pack.</li> <li>The DBA_STREAMS_TP_PATH_BOTTLENECK view is part of this pack.</li> <li>All views beginning with DBA_ADDM_ are part of this pack.</li> <li>Some data in DBA_STREAMS_TP_COMPONENT_STAT requires Oracle Diagnostics Pack. The following filter clause to any query on DBA_STREAMS_TP_COMPONENT_STAT shows Diagnostics-Pack-dependent data:</li> </ul> <pre>where STATISTIC_UNIT = 'PERCENT'</pre> <p>For example, the following query shows Diagnostics-Pack-dependent data only:</p> <pre>SELECT * FROM DBA_STREAMS_TP_COMPONENT_STAT where STATISTIC_UNIT = 'PERCENT';</pre> <ul style="list-style-type: none"> <li>All data dictionary views beginning with the prefix DBA_HIST_ are part of this pack, along with their underlying tables. The only exception are the views: DBA_HIST_SNAPSHOT, DBA_HIST_DATABASE_INSTANCE, DBA_HIST_SNAP_ERROR, DBA_HIST_SEG_STAT, DBA_HIST_SEG_STAT_OBJ, and DBA_HIST_UNDOSTAT. They can be used without the Oracle Diagnostics Pack license.</li> <li>All data dictionary views with the prefix DBA_ADVISOR_ are part of this pack if queries to these views return rows with the value ADDM in the ADVISOR_NAME column or a value of ADDM* in the TASK_NAME column or the corresponding TASK_ID.</li> <li>The following reports found in the /rdbms/admin/ directory of the Oracle home directory are part of this pack: awrrpt.sql, awrrpti.sql, awrgdrpt.sql, awrgdrpti.sql, awrgdrpi.sql, addmrpt.sql, addmrpti.sql, ashrpt.sql, ashrpti.sql, awrddrpt.sql, awrddrpi.sql, awrsqrpti.sql, awrsqrpt.sql, awrextr.sql, awrload.sql, awrinfo.sql, spawrio.sql, and spawrrac.sql.</li> </ul> <p><b>Licensed Repository Views – Monitoring Views:</b></p>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
		<p>The following monitoring views are licensed under Oracle Diagnostics Pack:</p> <ul style="list-style-type: none"> <li>• MGMT\$ALERT_ANNOTATIONS</li> <li>• MGMT\$ALERT_CURRENT</li> <li>• MGMT\$ALERT_HISTORY</li> <li>• MGMT\$ALERT_NOTIF_LOG</li> <li>• MGMT\$AVAILABILITY_CURRENT</li> <li>• MGMT\$AVAILABILITY_HISTORY</li> <li>• MGMT\$BLACKOUT_HISTORY</li> <li>• MGMT\$BLACKOUTS</li> <li>• MGMT\$METRIC_COLLECTIONS</li> <li>• MGMT\$ALERT_CURRENT</li> <li>• MGMT\$METRIC_DAILY</li> <li>• MGMT\$METRIC_DETAILS</li> <li>• MGMT\$METRIC_HOURLY</li> <li>• MGMT\$TARGET_METRIC_COLLECTIONS</li> <li>• MGMT\$TARGET_METRIC_SETTINGS</li> </ul> <p><b>Licensed Repository Views – Template Views:</b></p> <p>The following template views are licensed under Oracle Diagnostics Pack:</p> <ul style="list-style-type: none"> <li>• MGMT\$TEMPLATES</li> <li>• MGMT\$TEMPLATE_METRIC_COLLECTION</li> <li>• MGMT\$TEMPLATE_METRIC_SETTINGS</li> <li>• MGMT\$TEMPLATE_POLICY_SETTINGS</li> </ul> <p><b>Additional Licensing Information:</b></p> <ul style="list-style-type: none"> <li>• The use of Automatic Workload Repository Hub (AWR Hub) features in the database requires both an Oracle Diagnostics Pack license and an OCI Operations Insights Service <a href="#">subscription</a>.</li> <li>• The use of PL/SQL APIs through the DBMS_AWRHUB package requires both an Oracle Diagnostics Pack license and an OCI Operations Insights Service <a href="#">subscription</a>.</li> <li>• The use of ADDM Spotlight in Enterprise Manager requires an Oracle Diagnostics Pack license.</li> <li>• The use of ADDM Spotlight in OCI Operations Insights Service requires both an Oracle Diagnostics Pack license and an OCI Operations Insights Service <a href="#">subscription</a>.</li> <li>• The use of Top Activity Lite in Enterprise Manager requires an Oracle Diagnostics Pack license.</li> <li>• The use of Top Activity Lite in OCI Database Management Service requires both an Oracle Diagnostics Pack license and an <a href="#">OCI Database Management Service subscription – Full Management</a>.</li> </ul>

**Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features**

Management Pack	Availability	Included Features
Oracle Tuning Pack	<p>Extra cost pack: <b>EE, EE-ES</b></p> <p>Included pack: <b>BaseDB EE, BaseDB EE-HP, BaseDB EE-EP, ExaDB</b></p>	<p><b>Features:</b></p> <p>Oracle Tuning Pack includes the following features:</p> <ul style="list-style-type: none"> <li>• SQL Access Advisor</li> <li>• SQL Tuning Advisor</li> <li>• Oracle Database In-Memory Advisor</li> <li>• Automatic SQL Tuning</li> <li>• SQL Profiles</li> <li>• Real-time SQL and PL/SQL Monitoring</li> <li>• Real-time Database Operations Monitoring</li> <li>• Reorganize objects</li> </ul> <p>A new initialization parameter, <code>CONTROL_MANAGEMENT_PACK_ACCESS</code>, is introduced to control access to Oracle Diagnostics Pack and Oracle Tuning Pack in the database server. This parameter can be set to one of three values:</p> <ul style="list-style-type: none"> <li>• <code>DIAGNOSTIC+TUNING</code>: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is enabled in the database server.</li> <li>• <code>DIAGNOSTIC</code>: Only Oracle Diagnostics Pack functionality is enabled in the server.</li> <li>• <code>NONE</code>: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server.</li> </ul> <p>Any and all methods of accessing Oracle Tuning Pack functionality, whether through Enterprise Manager Console, Desktop Widgets, command-line APIs, or direct access to the underlying data, requires an Oracle Tuning Pack license.</p> <p><b>Prerequisites:</b></p> <p>Oracle Tuning Pack requires Oracle Diagnostics Pack.</p> <p><b>Licensed Links:</b></p> <p>To determine which links in Enterprise Manager are part of Oracle Tuning Pack, click the <b>Setup</b> link on the top right-hand part of the Enterprise Manager Home page.</p> <ul style="list-style-type: none"> <li>• When you click the <b>Setup</b> link, the navigation bar contains the <b>Management Pack Access</b> link. Click this link.</li> <li>• This will take you to the Management Pack Access page, which allows you to grant and remove access from all the management packs. <ul style="list-style-type: none"> <li>– For Enterprise Manager Database Control, click the <b>Remove Access</b> radio button for the Tuning Pack and click <b>Apply</b>.</li> <li>– For Enterprise Manager Cloud Control, click the appropriate check box for the Tuning Pack and click <b>Apply</b>.</li> </ul> </li> </ul> <p>This procedure disables all the links and tabs associated with Oracle Tuning Pack in Enterprise Manager. All the disabled links and tabs are part of Oracle Tuning Pack and therefore require a pack license.</p> <p><b>Licensed Command Line APIs:</b></p> <p>Oracle Tuning Pack features can also be accessed by way of database server APIs and command-line interfaces:</p> <ul style="list-style-type: none"> <li>• <code>DBMS_ADVISOR</code>, when the value of the <code>advisor_name</code> parameter is either SQL Tuning Advisor or SQL Access Advisor.</li> <li>• <code>DBMS_AUTO_SQLTUNE</code></li> <li>• <code>DBMS_PERF</code></li> <li>• <code>DBMS_SQL_MONITOR</code></li> </ul>

Table 1-15 (Cont.) Oracle Management Packs and Their Permitted Features

Management Pack	Availability	Included Features
		<ul style="list-style-type: none"><li>• DBMS_SQLTUNE (See Note)</li><li>• V\$SQL_MONITOR</li><li>• V\$SQL_PLAN_MONITOR</li><li>• The following report found in the <code>/rdbms/admin/</code> directory of the Oracle home directory is part of this pack: <code>sqltrpt.sql</code>.</li></ul> <p><b>Note:</b> If you are licensed for the on-premises Oracle Database Enterprise Edition, then you can use certain subprograms of the <code>DBMS_SQLTUNE</code> package even if you do not have an Oracle Tuning Pack license. See the SQL Tuning Sets entry in <a href="#">Table 1-6</a> for more information.</p>

## 1.6 Checking for Feature, Option, and Management Pack Usage

Oracle provides the script `options_packs_usage_statistics.sql`, which enables you to check feature usage, Oracle Database option usage, and Oracle management pack usage on your database. This script lists, in two distinct sections:

- Oracle Database option and Oracle management pack usage
- Features used by each option and management pack

You can obtain the script from My Oracle Support as follows:

1. Use a Web browser to view the My Oracle Support Web site:

<https://support.oracle.com>

2. Log in to My Oracle Support.

If you are not a My Oracle Support registered user, then click **Register** and follow the registration instructions.

3. Search for Document ID 1317265.1, or access it directly with the following URL:

<https://support.oracle.com/rs?type=doc&id=1317265.1>

You can manually run the script on an individual database or use Oracle Enterprise Manager Job System to automatically run the script on multiple databases. Refer to *Oracle Enterprise Manager Cloud Control Administrator's Guide* for information on Oracle Enterprise Manager Job System.



### Note:

The information obtained from this script will provide you an overview of the licensable Oracle Database options and Oracle management packs that were identified as used by your organization. This is to be used for informational purposes only and this does not represent your license entitlement or requirement. Please contact the License Management Services representative at <http://www.oracle.com/us/corporate/license-management-services/index.html> to understand your license requirements.

## 1.7 Special License Rights

**Table 1-16 Special License Rights**

Feature / Option	Licensing Information
Data Guard Far Sync	The far sync instance can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the far sync instance.
Enterprise User Security	If you wish to use Enterprise User Security in Oracle Database Enterprise Edition, you no longer need to license the Oracle Advanced Security option for Kerberos and PKI based authentication. It does require a corresponding Oracle Identity Management Directory Services Plus to be licensed. Any Oracle Advanced Security licenses purchased on or before January 31, 2004, have restricted use of the Oracle Internet Directory (OID) component of Oracle Directory Services Plus to support Enterprise User Security.
Global Data Services	The GSM listener can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the GSM listener.
Infrastructure repository databases	<p>A separate single instance Oracle Database can be installed and used as an infrastructure repository for RMAN, Oracle Enterprise Manager Cloud Control, Automatic Workload Repository (AWR) Warehouse, Global Data Services Catalog, Sharding Catalog, and Grid Infrastructure Management Repository without additional license requirements, provided that all the targets are correctly licensed. It may not be used or deployed for other uses.</p> <p>The infrastructure repositories for RMAN, Oracle Enterprise Manager Cloud Control, AWR Warehouse, Global Data Services Catalog, and Sharding Catalog can be shared in one database, or deployed in separate databases. Enterprise Edition must be used for the infrastructure repository database(s).</p> <p>If Oracle RAC is used for the infrastructure database, then Oracle RAC licenses for all servers, and Enterprise Edition licenses for all but the first server, are required.</p> <p>If Data Guard is used for the infrastructure database for RMAN, Oracle Enterprise Manager Cloud Control, AWR Warehouse, Global Data Services, and Grid infrastructure management Repository, then an Enterprise Edition license for the standby server is required. The Infrastructure Database for the Sharding Catalog can be protected with Data Guard without a second Enterprise Edition license.</p>
Oracle ASM Cluster File System (Oracle ACFS)	<p>When used with non-Oracle Database files, all Oracle ACFS features are free.</p> <p>When used with Oracle Database files, all Oracle ACFS features are free, with the following exceptions:</p> <ul style="list-style-type: none"> <li>• ACFS Auditing - Not available (use Oracle Audit Vault*)</li> <li>• ACFS Compression - Not available (use Oracle Advanced Compression*)</li> <li>• ACFS Encryption - Not available (use Oracle Transparent Data Encryption (TDE), part of the Oracle Advanced Security option*)</li> <li>• ACFS Security - Not available (use Oracle Database Vault*)</li> </ul> <p>* Requires appropriate full-use licenses to these products or components.</p> <p>Oracle will provide support services for Oracle ACFS only if the server it operates on also operates an Oracle product, which may include Oracle Linux or Oracle Solaris, which is under an Oracle support contract.</p>
Oracle Automatic Storage Management (Oracle ASM)	Oracle ASM is free to use with all Oracle databases and Oracle ACFS file systems.

**Table 1-16 (Cont.) Special License Rights**

Feature / Option	Licensing Information
Oracle Clusterware	Oracle Clusterware provides cluster membership and high availability monitoring and failover. Oracle Clusterware may be used to protect any application (restarting or failing over the application in the event of a failure) on any server, free of charge. Oracle will provide support for Clusterware only if the server is running an Oracle product that is under a valid Oracle support contract. Examples of such products include, but are not limited to, Oracle Linux, Oracle Solaris, Oracle Database, and Oracle Fusion Middleware.
Oracle Connection Manager	Oracle Connection Manager can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Connection Manager.
Oracle Data Guard broker	You can install the broker command line interface DGMGRL and run the observer software on computer systems that are separate from the Oracle Data Guard primary and standby systems. It is not necessary to obtain a separate license for a system hosting the observer.
Oracle Database Backup Cloud Service	Oracle Database Backup Cloud Service includes use of the following two features from the Oracle Advanced Security option or the Oracle Advanced Compression option at no additional cost: <ul style="list-style-type: none"><li>• RMAN backup encryption</li><li>• All RMAN backup compression algorithms</li></ul> To use additional features of the Oracle Advanced Security option or the Oracle Advanced Compression option, you must license those options separately. In addition, the Oracle Advanced Security option must be separately licensed when performing RMAN encrypted backups directly to disk.
Oracle Database Gateway for ODBC	Oracle Database Gateway for ODBC can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Gateway for ODBC.
Oracle Database Provider for DRDA	Oracle Database Provider for DRDA can be installed and used on a machine different from the machine where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the machine running Oracle Database Provider for DRDA.
Oracle Database Vault	When Oracle Database Vault is configured and enabled, it configures and enables Oracle Label Security. Oracle Label Security is solely restricted for use by the Oracle Database Vault software. If you want to create Oracle Label Security policies, then you must purchase a full-use license for Oracle Label Security.

**Table 1-16 (Cont.) Special License Rights**

Feature / Option	Licensing Information
Oracle Real Application Testing	<p>The full functionality of Oracle Real Application Testing is available only on Oracle Database 11g Release 1 or higher. Partial functionality of Oracle Real Application Testing is available to customers wishing to upgrade from Oracle9i Database Release 2 or Oracle Database 10g.</p> <p>The functionality available on Oracle9i Database Release 2 is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Database Replay:</b> Only the Workload Capture feature is supported, and the captured workload may only be replayed only on Oracle Database 11g. This feature can be used only to facilitate upgrades from Oracle 9i Database Release 2 to Oracle Database 11g or higher.</li> </ul> <p>The functionality available on Oracle Database 10g Release 2 is as follows:</p> <ul style="list-style-type: none"> <li>• <b>Database Replay:</b> Only the Workload Capture feature is supported, and the captured workload may be replayed only on Oracle Database 11g. This feature can be used only to facilitate upgrades from Oracle Database 10g Release 2 to Oracle Database 11g.</li> <li>• <b>SQL Performance Analyzer:</b> Only the Remote SQL Test Execute and SQL Capture into SQL Tuning Set features are supported. These features can be used only to facilitate upgrades from Oracle9i Database Release 2 and Oracle Database 10g Release 1 to Oracle Database 10g Release 2 or higher. When upgrading to Oracle Database 10g Release 2 from earlier releases (Oracle 9i Database or Oracle Database 10g Release 1), Oracle Database 11g is needed to remotely execute SQL on the target database (that is, Oracle Database 10g Release 2). Oracle Real Application Testing licensing is required for both systems, Oracle Database 10g Release 2 and Oracle Database 11g.</li> </ul>
Oracle Secure Backup Oracle Secure Backup Cloud Module	<p>For backup of Oracle Database Enterprise Edition, Oracle Secure Backup includes restricted use licenses for:</p> <ul style="list-style-type: none"> <li>• RMAN backup encryption to tape or Amazon S3</li> <li>• RMAN backup compression leveraging LOW, MEDIUM, BASIC or HIGH algorithms</li> </ul> <p>The Oracle Secure Backup special-use licenses apply to RMAN backup encryption, which is a component of the Oracle Advanced Security option, and RMAN backup compression levels, which are components of the Oracle Advanced Compression option. To use additional features of the Oracle Advanced Security option or the Oracle Advanced Compression option, you must license those options separately. In addition, the Oracle Advanced Security option must be licensed when performing RMAN encrypted backups directly to disk whether or not Oracle Secure Backup is the media manager.</p>
Oracle Secure Backup Cloud Module on ZDLRA	<p>Oracle Secure Backup Cloud Module can be used free of charge on Oracle Zero Data Loss Recovery Appliance (ZDLRA) for the sole purpose of backing up data to and restoring data from S3-compatible storage devices that are in the same campus as ZDLRA.</p> <p>This special use license does not allow you to move such data to or from Non-Oracle Public Cloud Environments, either directly or through gateway devices.</p> <p>You are allowed to move such data to and from Oracle databases that do not have ZDLRA, however, Oracle Secure Backup Cloud Module must be licensed on those Oracle databases. For example, if you use Oracle Secure Backup Cloud Module free of charge on ZDLRA to back up data to an S3-compatible storage device, you can then use Oracle Secure Backup Cloud Module to restore that data to an Oracle database without ZDLRA, but only if Oracle Secure Backup Cloud Module is licensed on that Oracle database.</p> <p>To move data to or from the Oracle Cloud Infrastructure, the ZDLRA provides an integration with the OCI Backup Cloud Module which does not require a license.</p>



**Table 1-16 (Cont.) Special License Rights**

Feature / Option	Licensing Information
Oracle Secure Backup Express	<p>Oracle Secure Backup Express is bundled with the Oracle Database. Support for Oracle Secure Backup Express is provided exclusively through a free Oracle Discussion Forum monitored by Oracle employees as well as community experts.</p> <p>Oracle Secure Backup Express can back up an Oracle database as well as Oracle home files and other file system data requiring tape protection.</p> <p>For more information, refer to <i>Oracle Secure Backup Licensing Information</i>.</p>
Oracle Spatial and Graph	<p>These Oracle Spatial and Graph components can be installed and used on a server different from the server where the Oracle Database is installed and used without a separate license:</p> <ul style="list-style-type: none"> <li>• Spatial Geocoder</li> <li>• Spatial Routing engine</li> <li>• Spatial Web Services</li> <li>• Property Graph client</li> <li>• In-memory analyst (PGX)</li> <li>• Spatial Visualization component</li> <li>• Spatial Studio</li> </ul> <p>For more information, see <i>Oracle Spatial and Graph Developer's Guide</i> and <i>Oracle Spatial and Graph Property Graph Developer's Guide</i>.</p>
Oracle Wallet	<p>An Oracle Wallet is a PKCS#12 container used to store authentication and encryption keys. The Oracle database secure external password store feature stores passwords in an Oracle Wallet for password-based authentication to the Oracle database. The Oracle Wallet may also be used to store credentials for PKI authentication to the Oracle Database, configuration of network encryption (SSL/TLS), and Oracle Advanced Security transparent data encryption (TDE) master encryption keys. Network encryption (native network encryption, network data integrity, and SSL/TLS) and strong authentication services (Kerberos, PKI, and RADIUS) are no longer part of Oracle Advanced Security and are available in all licensed editions of all supported releases of Oracle Database.</p>
Shard Director	<p>The shard directors can be installed and used on a server different from the server where the Oracle Database is installed and used. It is not necessary to obtain a separate license for the server running the shard directors.</p>
XStream	<p>XStream provides application programming interfaces (APIs) that enable client applications to receive real-time data changes from an Oracle database (using XStream Out APIs) and to send real-time data changes to an Oracle database (using XStream In APIs). These data changes can be shared between Oracle databases and other systems, such as filesystems and non-Oracle databases. XStream is licensed via the Oracle GoldenGate product. You must purchase a license for this product before using the XStream APIs. Please contact your Oracle sales representative for additional information.</p>

## 1.8 Restricted Use Licenses

**Table 1-17 Restricted Use Licenses**

Feature / Option	Licensing Information
AQ Sharded Queues	<p>Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of supporting AQ Sharded Queues. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.</p>



**Table 1-17 (Cont.) Restricted Use Licenses**

Feature / Option	Licensing Information
Oracle Advanced Compression Oracle Advanced Security	<p>Restricted use licenses for Oracle Advanced Compression and Oracle Advanced Security are granted when performing either of the following migrations:</p> <ul style="list-style-type: none"> <li>• Oracle Zero Downtime Migration</li> <li>• Oracle Cloud Infrastructure Database Migration (DMS)</li> </ul> <p>These restricted use licenses are in effect only while the migration is being performed and apply solely for the purposes of the migration operation. All other uses of Oracle Advanced Compression and Oracle Advanced Security require a license.</p>
Oracle Advanced Security	<p>Any Oracle Advanced Security licenses purchased on or before January 31, 2004, have restricted use of the Oracle Internet Directory (OID) component of Oracle Directory Services Plus to support Enterprise User Security.</p> <p>Oracle Advanced Security includes a restricted use license for the following Oracle Enterprise Manager features:</p> <ul style="list-style-type: none"> <li>• Application Data Models (previously called Data Discovery and Modeling)</li> <li>• Sensitive Column Types and Sensitive Data Discovery</li> <li>• Application Accelerators</li> </ul> <p>If you want to use the Oracle Enterprise Manager features listed above not solely for the purposes of Oracle Advanced Security, then you must purchase a full-use license for Oracle Data Masking and Subsetting Pack.</p>
Oracle Application Server Containers for J2EE	<p>A restricted use license for Oracle Application Server Containers for J2EE (OC4J) is included with all editions (except for Oracle Database Express Edition). This embedded version is provided solely to support Oracle Enterprise Manager (Database and Cloud Control), Advanced Queuing Servlet, Ultra Search, and Application Express, and may not be used or deployed for other purposes</p>
Oracle Applications Unlimited	<p>An Oracle Base Database Service Enterprise Edition (BaseDB EE) instance being used to support an Oracle Cloud deployment of an Oracle Applications Unlimited application has restricted use of the following options: Oracle On-Line Analytical Processing (OLAP) and Oracle Partitioning. These options may be used only to support Oracle Applications Unlimited and may not be used or deployed for any other purpose.</p>
Oracle Big Data SQL	<p>Oracle Big Data SQL includes a Query Server that is used to query data sources including HDFS, Kafka, and NoSQL stores. Oracle Big Data SQL includes a restricted use license of Oracle Database for storing metadata (i.e. external tables and views) maintained by the Query Server. No other objects may be created in this Oracle Database.</p>
Oracle Data Masking and Subsetting Pack	<p>A restricted use license for Oracle Advanced Security is included for encrypted Data Pump exports and imports used by Oracle Data Masking and Subsetting. No other features of Oracle Advanced Security are included.</p>
Oracle Database Mobile Server	<p>Oracle Database Mobile Server is a powerful tool for controlling networks of mobile or embedded devices from a centralized management console. It provides a secure, scalable method for connecting applications running locally on mobile or embedded devices to an Oracle enterprise backend. The synchronization system is robust and fault tolerant. It is able to successfully synchronize over unreliable or intermittently available networks. Oracle Database Mobile Server provides management for applications, users, and devices. It runs on a variety of application server platforms, including Oracle WebLogic, Oracle Glassfish, and Apache TomEE.</p> <p>On the client device side, it is designed to work with Oracle Berkeley DB as a data store, providing efficient, reliable, and secure data management running locally on mobile and embedded devices. It is also compatible with SQLite, a widely used open source data store. Database Mobile Server supports many popular device platforms including Oracle Java, Linux, Windows (laptop as well as mobile/CE), and Android.</p>

**Table 1-17 (Cont.) Restricted Use Licenses**

Feature / Option	Licensing Information
Oracle Database Vault	<p>Oracle Database Vault includes a restricted use license for the following Oracle Enterprise Management features:</p> <ul style="list-style-type: none"> <li>• Application Data Modeling (previously called Data Discovery and Modeling)</li> <li>• Application Data Modeling accelerator for select versions of Oracle E-Business Suite</li> <li>• Application Data Modeling accelerator for select versions of Oracle Fusion Applications</li> </ul>
Oracle HTTP Server	<p>A restricted use license for Oracle HTTP Server is included with all editions (except for Oracle Database Express Edition) when the HTTP Server is running on the same server as the database. Running Oracle HTTP server on a different server requires that other server be licensed to use the HTTP server, either through an Oracle Database license or an Oracle Application Server license</p>
Oracle Internet Directory Oracle Unified Directory	<p>A restricted use license for Oracle Identity Management Directory Services Plus components Oracle Internet Directory (OID)/Oracle Unified Directory (OUD) is included with all editions (except for Oracle Database Express Edition) if users use the Directory Naming feature to configure Oracle Net Services. OID/OUD may not be used or deployed for other uses.</p>
Oracle Label Security	<p>Oracle Label Security includes a restricted use license for the following Oracle Enterprise Manager features:</p> <ul style="list-style-type: none"> <li>• Application Data Models (previously called Data Discovery and Modeling)</li> <li>• Sensitive Column Types and Sensitive Data Discovery</li> <li>• Application Accelerators</li> </ul> <p>If you want to use the Oracle Enterprise Manager features listed above not solely for the purposes of Oracle Label Security, then you must purchase a full-use license for Oracle Data Masking and Subsetting Pack.</p>
Oracle Programmer	<p>Oracle Programmer provides application programmers with a programmatic interface to any edition of Oracle Database. However, in order to user Oracle Programmer, you must purchase a separate Oracle Programmer license.</p> <p>Oracle Programmer includes the following products:</p> <ul style="list-style-type: none"> <li>• Embedded SQL-style interfaces: Pro*C/C++, Pro*COBOL, Pro*Fortran, SQL*Module for Ada, SQLJ</li> <li>• Utilities to generate host-language bindings from database schemas: Object Type Translator and JPub</li> </ul>
Oracle Radius Agent	<p>A restricted use license for Oracle Identity Management Directory Services Plus component Oracle Radius Agent (ORA) is included with all editions (except for Oracle Database Express Edition) if users use Oracle Unified Directory/Oracle Internet Directory/Microsoft Active Directory for first-factor authentication. ORA may not be used or deployed for use with other Radius services. For MFA capabilities, additional licensing would be required, refer to <a href="#">Oracle Identity and Access Management Independent License Offerings</a>.</p>
Oracle Real Application Testing	<p>Restricted use licenses of Load Testing Accelerator for Oracle Database, Oracle Load Testing, and Oracle Load Testing Controller are included with Oracle Real Application Testing for use for Oracle Database testing and may not be used for application testing.</p>
Oracle Secure Backup Express	<p>Oracle Secure Backup Express is a centralized tape backup management solution that provides data protection for single-server Oracle Database environments. A restricted use license for Oracle Secure Backup Express is included with all Oracle Database editions. Oracle Secure Backup Express is limited to a single host with one direct-attached tape drive and has some restrictions on advanced feature usage. Refer to the <i>Oracle Secure Backup Licensing Information</i> for additional information.</p>

**Table 1-17 (Cont.) Restricted Use Licenses**

Feature / Option	Licensing Information
Oracle Sharding	Oracle Sharding includes a restricted use license for Global Data Services. If you want to use Global Data Services not solely for the purposes of Oracle Sharding, then you must be licensed for the Oracle Active Data Guard option.
Oracle Spatial and Graph	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of supporting the following Spatial, Property Graph, and RDF Graph Technologies (RDF/OWL) features: spatial topology, property graph schema, and RDF Semantic Graph. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.
Oracle Zero Data Loss Recovery Appliance (ZDLRA)	Restricted use of Oracle Advanced Security is allowed for Oracle databases hosted on on-premises Linux platforms, free of charge, for the sole purpose of using the Recovery Appliance Space-Efficient Encrypted Backup feature of ZDLRA. All other uses of Oracle Advanced Security require a license for the Oracle Advanced Security option, where available.
Recovery Manager (RMAN)	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of supporting the RMAN recovery catalog. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.
Real Application Security	Restricted use of Real Application Security (RAS) is allowed on Oracle Database Standard Edition 2 (SE2) and Oracle Base Database Service Standard Edition (BaseDB SE), free of charge, for the sole purpose of using the subprograms in the DBMS_NETWORK_ACL_ADMIN package.
Unified Audit	Restricted use of Oracle Partitioning is allowed on all offerings, free of charge, for the sole purpose of storing the unified audit trail. All other uses of Oracle Partitioning require a license for the Oracle Partitioning option, where available.

# 2

## Third-Party Notices and/or Licenses

- [Third-Party Notices and/or Licenses for Oracle Database](#)
- [Third-Party Notices and/or Licenses for Oracle Database Components](#)
- [Written Offer for Source Code](#)

### 2.1 Third-Party Notices and/or Licenses for Oracle Database

#### 2.1.1 Commercial Software Included in Oracle Database

Commercial software products or components distributed in Oracle Database 19c are identified in the following table along with the applicable licensing information.

**Table 2-1 Commercial Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
MapInfo Corp.	Projections Code 1.0	Portions of this software Copyright 1992-2000, MapInfo Corporation, ALL RIGHTS RESERVED.
RSA	RSA BSAFE Crypto-J 6.2.2.1	This product includes code licensed from RSA Data Security. See <a href="#">Figure 2-1</a> .

**Figure 2-1 RSA Secure Logo**



#### 2.1.2 Open Source or Other Separately Licensed Software Included in Oracle Database

Required notices for open source or other separately licensed software products or components distributed in Oracle Database 19c are identified in the following table along with the applicable licensing information. Additional notices and/or licenses may be found in the included documentation or readme files of the individual third party software.

**Table 2-2 Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
ANTLR	Antlr 3.2	<p>ANTLR 3 License [The BSD License] Copyright (c) 2003-2007, Terence Parr All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>
Apache	Apache Commons Math 3.6.1	For a copy of the license, see <a href="#">Apache Commons Math 3.6.1 License</a> .
Apache	Apache Tomcat 8.5.37	For a copy of the license, see <a href="#">Apache Tomcat 8.5.37 License</a> .
Apache	Batik SVG Toolkit 1.10	For a copy of the license, see <a href="#">Batik SVG Toolkit 1.10 License</a> .
Apache	Commons Beanutils 1.9.3	<p>NOTICE.txt Apache Commons BeanUtils Copyright 2000-2016 The Apache Software Foundation This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>). LICENSE.txt This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	Commons CSV 1.5	<p>NOTICE.txt Apache Commons CSV Copyright 2005-2017 The Apache Software Foundation This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>). LICENSE.txt This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Apache	Commons Compress 1.18	<p>Commons Compress 1.18</p> <p>COPYRIGHT: Copyright 2002-2018 The Apache Software Foundation</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>=====</p> <p>4P Dependencies:</p> <p>-----</p> <p>From Notice File:</p> <p>The files in the package org.apache.commons.compress.archivers.sevenz were derived from the LZMA SDK, version 9.20 (C/ and CPP/7zip/), which has been placed in the public domain:</p> <p>"LZMA SDK is placed in the public domain." (<a href="http://www.7-zip.org/sdk.html">http://www.7-zip.org/sdk.html</a>)</p> <p>Anyone is free to copy, modify, publish, use, compile, sell, or distribute the original LZMA SDK code, either in source code form or as a compiled binary, for any purpose, commercial or non-commercial, and by any means.</p>
Apache	Commons FileUpload 1.4	<p>Apache Commons FileUpload</p> <p>Copyright 2002-2017 The Apache Software Foundation</p> <p>This product includes software developed at</p> <p>The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Apache	Commons IO 2.6	<p>Copyright Header:</p> <pre> =====  /*  * Licensed to the Apache Software Foundation (ASF) under one  * or more  * contributor license agreements. See the NOTICE file  * distributed with  * this work for additional information regarding copyright  * ownership.  * The ASF licenses this file to You 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.  */ </pre> <p>Notice</p> <pre> ===== Apache Commons IO Copyright 2002-2012 The Apache Software Foundation This product includes software developed by The Apache Software Foundation (http://www.apache.org/). License Text ===== http://www.apache.org/licenses/LICENSE-2.0 This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>. </pre>
Apache	Commons Lang 3.8.1	<p>LICENSE:</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>COPYRIGHT:</p> <p>Ships with following notice file:</p> <p>Apache Commons Lang</p> <p>Copyright 2001-2018 The Apache Software Foundation</p> <p>This product includes software developed at</p> <p>The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Apache	Commons Logging 1.2	<p>Apache Commons Logging</p> <p>Copyright 2003-2014 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	HttpComponents HttpClient 4.5.5	<p>Apache HTTPComponents Client</p> <p>Copyright 1999-2017 The Apache Software Foundation</p> <p>You may not use the identified files except in compliance with the Apache License, Version 2.0 (the "License.")</p> <p>You may obtain a copy of the License at <a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a>. A copy of the license is also reproduced below.</p> <p>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.</p> <p>See the License for the specific language governing permissions and limitations under the License.</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	HttpComponents HttpClient 4.5.7	For a copy of the license, see <a href="#">HttpComponents HttpClient 4.5.7 License</a> .
Apache	HttpCore 4.4.9	<p>Apache HttpComponents Core 4.4.9</p> <p>Copyright 2005-2018 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	HttpCore 4.4.11	For a copy of the license, see <a href="#">HttpCore 4.4.11 License</a> .
Apache	Log4J 2.11.1	For a copy of the license, see <a href="#">Log4J 2.11.1 License</a> .
Apache	Lucene 7.5.0	For a copy of the license, see <a href="#">Lucene 7.5.0 License</a> .
Apache	XML Graphics Commons 2.3	<p>NOTICE.txt</p> <p>Apache XML Graphics Commons</p> <p>Copyright 2006-2018 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>LICENSE.txt</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	XMLBeans 2.6.4	For a copy of the license, see <a href="#">XMLBeans 2.6.4 License</a> .
Apache	Xerces2 Java 2.12.0	For a copy of the license, see <a href="#">Xerces2 Java 2.12.0 License</a> .
Apache	httpmime 4.5.7	For a copy of the license, see <a href="#">httpmime 4.5.7 License</a> .



**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Apple Computer	Apple MDNS (Bonjour) 544-1	<p>Apple MDNS (Bonjour) Copyright (c) 2002-2013 Apple Computer, Inc. All rights reserved.</p> <p>Licensed under the Apache License, Version 2.0 (the "License")</p> <p>To accommodate license compatibility with the widest possible range of client code licenses, the shared library code, which is linked at runtime into the same address space as the client using it, is licensed under the terms of the "Three-Clause BSD License".</p> <p>The Linux Name Service Switch code, contributed by National ICT Australia Ltd (NICTA) is licensed under the terms of the NICTA Public Software Licence (which is substantially similar to the "Three-Clause BSD License", with some additional language pertaining to Australian law).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
CPAN	DBD-Oracle 1.76	<p>For a copy of the license, see <a href="#">DBD-Oracle 1.76 License</a>.</p>
Douglas E. Wegscheid, et al	Time::HiRes 1.9758	<p>Copyright (c) 1996-2002 Douglas E. Wegscheid. All rights reserved.</p> <p>Copyright (c) 2002, 2003, 2004, 2005, 2006, 2007, 2008 Jarkko Hietaniemi.</p> <p>All rights reserved.</p> <p>Copyright (C) 2011, 2012, 2013 Andrew Main (Zefram)</p> <p>Source code for modules available under the Perl (Artistic) license may be available at <a href="http://www.cpan.org/modules/index.html">http://www.cpan.org/modules/index.html</a> or follow the instructions to obtain source code found at <a href="https://www.oracle.com/downloads/opensource.html">https://www.oracle.com/downloads/opensource.html</a>.</p> <p>Portions of this program use Time::HiRes 1.9758, the open source version is made available by Douglas E. Wegscheid, et al under the terms of the below version of the Artistic License. As such, Oracle is required to provide the following notices. Note, however, that the Oracle program license that accompanied this program determines your right to use the Oracle program, including Time::HiRes 1.9758, and the terms contained in the following notices do not change those rights.</p> <p>This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.</p> <p>Oracle elects to license this file available under the Artistic License as expressly permitted by the Perl licensing terms.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Expat maintainers	Expat 2.2.6	<p>Copyright (c) 1998-2000 Thai Open Source Software Center Ltd and Clark Cooper</p> <p>Copyright (c) 2001-2017 Expat maintainers</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Facebook, Inc	Zstandard 1.3.7	<p>ZSTANDARD 1.3.2 is dual- licensed under BSD-2 style and GPLv2 style. In this case, Oracle has elected to distribute under the BSD-2 style license.</p> <p>Copyright (c) 2016-present, Yann Collet, Facebook, Inc. All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name Facebook nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-annotations 2.9.8	jackson-annotations 2.9.8 COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-core 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> . jackson-core v. 2.9.5 Source URL: <a href="https://github.com/FasterXML/jackson-core/tree/jackson-core-2.9.5">https://github.com/FasterXML/jackson-core/tree/jackson-core-2.9.5</a> License URL: <a href="https://github.com/FasterXML/jackson-core/blob/jackson-core-2.9.5/src/main/resources/META-INF/LICENSE">https://github.com/FasterXML/jackson-core/blob/jackson-core-2.9.5/src/main/resources/META-INF/LICENSE</a> This copy of Jackson JSON processor streaming parser/generator is licensed under the Apache (Software) License, version 2.0 ("the License"). See the License for details about distribution rights, and the specific rights regarding derivate works. You may obtain a copy of the License at: <a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a> copyright URL: <a href="https://github.com/FasterXML/jackson-core/blob/fa64390b1bd5f1435daa9d2b17a58594cfb22817/src/main/java/com/fasterxml/jackson/core/Versioned.java">https://github.com/FasterXML/jackson-core/blob/fa64390b1bd5f1435daa9d2b17a58594cfb22817/src/main/java/com/fasterxml/jackson/core/Versioned.java</a>  /* Jackson JSON-processor. * * Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi */  package com.fasterxml.jackson.core;  /** * Interface that those Jackson components that are explicitly versioned will implement. * Intention is to allow both plug-in components (custom extensions) and applications and * frameworks that use Jackson to detect exact version of Jackson in use. * This may be useful for example for ensuring that proper Jackson version is deployed * (beyond mechanisms that deployment system may have), as well as for possible * workarounds. */ public interface Versioned { /** * Method called to detect version of the component that implements this interface; * returned version should never be null, but may return specific "not available" * instance (see {@link Version} for details). */ Version version(); }

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-core 2.9.6	<p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p><b>COPYRIGHT NOTICE</b></p> <p><b># Jackson JSON processor</b></p> <p>Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers, as well as supported commercially by FasterXML.com.</p> <p><b>## Licensing</b></p> <p>Jackson core and extension components may licensed under different licenses. To find the details that apply to this artifact see the accompanying LICENSE file. For more information, including possible other licensing options, contact FasterXML.com (<a href="http://fasterxml.com">http://fasterxml.com</a>).</p> <p><b>## Credits</b></p> <p>A list of contributors may be found from CREDITS file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.</p>
FasterXML, LLC	jackson-core 2.9.8	<p>jackson-core 2.9.7</p> <p><b>COPYRIGHT:</b> Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p><b>LICENSE:</b> Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-databind 2.9.8	<p>jackson-databind 2.9.7</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>COPYRIGHT NOTICE</p> <p># Jackson JSON processor</p> <p>Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers, as well as supported commercially by FasterXML.com.</p> <p>## Licensing</p> <p>-----jackson-core 2.9.7 -----</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>Jackson core and extension components may be licensed under different licenses. To find the details that apply to this artifact see the accompanying LICENSE file. For more information, including possible other licensing options, contact FasterXML.com (<a href="http://fasterxml.com">http://fasterxml.com</a>).</p> <p>## Credits</p> <p>A list of contributors may be found from CREDITS file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.</p> <p>-----jackson-annotations 2.9.7 -----</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-databind 2.9.8	<p>jackson-databind 2.9.8</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>COPYRIGHT NOTICE</p> <p># Jackson JSON processor</p> <p>Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers, as well as supported commercially by FasterXML.com.</p> <p>## Licensing</p> <p>-----jackson-core 2.9.8 -----</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>Jackson core and extension components may be licensed under different licenses. To find the details that apply to this artifact see the accompanying LICENSE file. For more information, including possible other licensing options, contact FasterXML.com (<a href="http://fasterxml.com">http://fasterxml.com</a>).</p> <p>## Credits</p> <p>A list of contributors may be found from CREDITS file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.</p> <p>-----jackson-annotations 2.9.8 -----</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
FasterXML, LLC	jackson-jaxrs-base 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-jaxrs-json-provider 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-module-jaxb-annotations 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FreeBSD	MD5_Crypt 1.2	<p>* "THE BEER-WARE LICENSE" (Revision 42):</p> <p>&lt;phk@login.dknet.dk&gt; wrote this file. As long as you retain this notice you can do whatever you want with this stuff. If we meet some day, and you think this stuff is worth it, you can buy me a beer in return. Poul-Henning Kamp</p>
Geonames.org	GeoNames Data 1.1.11	For a copy of the license, see <a href="#">GeoNames Data 1.1.11 License</a> .
Gisle Aas	IO::String 1.08	For a copy of the license, see <a href="#">IO::String 1.08 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Google	GSON 2.8.2	Google Gson This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Google	GoogleMaps API Code Samples	Portions of this code include modifications based on work created and shared by Google and used according to terms described in the Apache 2.0 license. See <a href="https://developers.google.com/maps/documentation/javascript/examples/">https://developers.google.com/maps/documentation/javascript/examples/</a> .
Google	Guava 23.6	Copyright (C) 2007 The Guava Authors 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 <a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a> 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. This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Google	Protocol Buffers (aka Google protobuf) 3.5.1	For a copy of the license, see <a href="#">Protocol Buffers (aka Google protobuf) 3.5.1 License</a> .
Grant McLean	XML::Simple 2.25	For a copy of the license, see <a href="#">XML::Simple 2.25 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Grzegorz Kowal	Launch4j 3.11	<p>Launch4j (<a href="http://launch4j.sourceforge.net/">http://launch4j.sourceforge.net/</a>)</p> <p>Cross-platform Java application wrapper for creating Windows native executables.</p> <p>Copyright (c) 2004, 2017 Grzegorz Kowal</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ol style="list-style-type: none"> <li>1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>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.</li> <li>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.</li> </ol> <p>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.</p>



**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Hewlett-Packard Company	Scheme-to-C compiler 180c985	<pre> ;* Copyright (c) 1989-1993 Hewlett-Packard Development Company, L.P. ;*      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. </pre>
JCraft	JSch 0.1.55	For a copy of the license, see <a href="#">JSch 0.1.55 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Jean-loup Gailly and Mark Adler	Zlib Data Compression Library 1.2.11	<p>Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler</p> <p>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.</p> <p>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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.</li> <li>3. This notice may not be removed or altered from any source distribution.</li> </ol> <p>Jean-loup Gailly                      Mark Adler jloup@gzip.org                      madler@alumni.caltech.edu</p>
John Resig	jQuery 1.4.3	<p>Copyright (c) 2010 John Resig.</p> <p>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.</p> <p>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.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Julian R Seward	bzip2 1.0.6	<p>This program may include libbzip2.</p> <p>"libbzip2" and all documentation, are copyright (C) 1996-2010 Julian R Seward. All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ol style="list-style-type: none"> <li>1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>2. 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.</li> <li>3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.</li> <li>4. The name of the author may not be used to endorse or promote products derived from this software without specific prior written permission.</li> </ol> <p>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.</p> <p>Julian Seward, jseward@bzip.org</p> <p>bzip2/libbzip2 version 1.0.6 of 6 September 2010</p>
Kenneth J. Albanowski	perl-TermReadKey 2.38	<p>Copyright (C) 1994-1999 Kenneth Albanowski. 2001-2016 Jonathan Stowe and others</p> <p>This package is dual licensed. You can either choose to license it under the original terms which were:</p> <p>Unlimited distribution and/or modification is allowed as long as this copyright notice remains intact.</p> <p>The code is also available under standard Perl terms. Oracle has elected to receive the code under the original terms.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Kernel.org	Linux Kernel RDMA source files 13-7	<pre> /*  * Copyright (c) 2005 Voltaire Inc. All rights reserved.  * Copyright (c) 2005-2014 Intel Corporation. All rights reserved.  *  * This software is available to you under a choice of one of two  * licenses. You may choose to be licensed under the terms of the GNU  * General Public License (GPL) Version 2, available from the file  * COPYING in the main directory of this source tree, or the  * OpenIB.org BSD license below:  *  *      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.  *  * 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.  */ </pre>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Larry Wall and Clark Cooper	XML::Parser 2.44	<p>A copy of this software is available at <a href="https://www.oracle.com/downloads/opensource.html">https://www.oracle.com/downloads/opensource.html</a> or may be received by following the directions at that site.</p> <p>Copyright (c) 1998-2000 Larry Wall and Clark Cooper. All rights reserved.</p> <p>This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.</p> <p>For a copy of the license, see <a href="#">Artistic License</a>.</p> <p>The download URL is <a href="https://cpan.metacpan.org/authors/id/T/TO/TODDR/XML-Parser-2.44.tar.gz">https://cpan.metacpan.org/authors/id/T/TO/TODDR/XML-Parser-2.44.tar.gz</a></p> <p>Copyright information below as mentioned here - <a href="https://metacpan.org/source/TODDR/XML-Parser-2.44/README">https://metacpan.org/source/TODDR/XML-Parser-2.44/README</a>.</p> <p>Copyright (c) 1998-2000 Larry Wall and Clark Cooper. All rights reserved.</p> <p>This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.</p>
Lincoln A. Baxter	Sys::SigAction 0.21	<p>For a copy of the license, see <a href="#">Sys::SigAction 0.21 License</a>.</p>
Makamaka Hannyaharamitu	perl-JSON 4.01	<p>A copy of the Standard Version of Perl modules in this product is available at <a href="https://www.oracle.com/downloads/opensource.html">https://www.oracle.com/downloads/opensource.html</a> or by following the directions on that page.</p> <p>Copyright 2005-2013 by Makamaka Hannyaharamitu</p> <p>This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.</p> <p>-----</p> <p>Perl is free software; you can redistribute it and/or modify it under the terms of either:</p> <p>a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or</p> <p>b) the "Artistic License"</p> <p>Oracle elects to receive the software under the Artistic License.</p> <p>For a copy of the license, see <a href="#">Artistic License</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Marc Prud'hommeaux	JLine 2.14.6	<p>Copyright (c) 2002-2016, the original author or authors. All rights reserved. <a href="http://www.opensource.org/licenses/bsd-license.php">http://www.opensource.org/licenses/bsd-license.php</a></p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>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.</p> <p>jansi 1.12 Apache 2.0 Apache License</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Massachusetts Institute of Technology	Kerberos 1.16.2	For a copy of the license, see <a href="#">Kerberos 1.16.2 License</a> .
Ned Konz	Archive::Zip 1.57	For a copy of the license, see <a href="#">Archive::Zip 1.57 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Nodeca	Pako 1.0.5	<p>(The MIT License)</p> <p>Copyright (C) 2014-2015 by Vitaly Puzrin</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Open Source Geospatial Foundation	Geospatial Data Abstraction Library/ OpenGIS Simple Features Reference Implementation (GDAL/OGR) 2.4	<p>For a copy of the license, see <a href="#">Geospatial Data Abstraction Library/ OpenGIS Simple Features Reference Implementation (GDAL/OGR) 2.4 License</a>.</p>
Open Web Application Security Project (OWASP)	Enterprise Security API (ESAPI) 2.1.0.1	<p>Copyright (c) 2007, The OWASP Foundation.</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of OWASP nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
OpenJPEG	OpenJPEG 2.1	For a copy of the license, see <a href="#">OpenJPEG 2.1 License</a> .
Oracle	JavaScript Extension Toolkit (JET) 5.1.0	For a copy of the license, see <a href="#">JavaScript Extension Toolkit (JET) 5.1.0 License</a> .
Oracle	JavaScript Extension Toolkit (JET) 6.0.0	For a copy of the license, see <a href="#">JavaScript Extension Toolkit (JET) 6.0.0 License</a> .
Paul Marquess	Compress::Raw::Zlib 2.081	For a copy of the license, see <a href="#">Compress::Raw::Zlib 2.081 License</a> .
Red Hat	Bean Validation API 2.0.1.Final	URL for License - <a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a> This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Sergey Lyubka	Mongoose 3.8	Uses the MIT license:  Copyright (c) 2004-2013 Sergey Lyubka Copyright (c) 2013 No Face Press, LLC (Thomas Davis) Copyright (c) 2013 F-Secure Corporation  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.
Shigeru Chiba	javassist 3.22.0-CR2	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .



**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
SourceForge	ipmiutil 2.23	<p>pefconfig.c Copyright (c) 2001-2007, Intel Corporation  ipmicmd.c Copyright (c) 2002-2006, Intel Corporation  ipmicmd.h Copyright (c) 2002, Intel Corporation  ipmims.c Copyright (c) 2002, Intel Corporation</p> <p>All rights reserved.  /*-----*</p> <p>The BSD License  Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <p>a. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</p> <p>b. 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.</p> <p>c. Neither the name of 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.</p> <p>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.</p> <p>*-----*/</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Terence Parr	StringTemplate 4.0.2	<p>The BSD License</p> <p>Copyright (c) 2012 Terence Parr</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of the author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Terracotta	Quartz Job Scheduler 2.3.0	<p>Quartz Job Scheduler version 2.2.3</p> <p>Copyright © 2003-2016 Software AG, Darmstadt, Germany and/or Software AG USA Inc., Reston, VA, USA, and/or its subsidiaries and/or its affiliates and/or their licensors.</p> <p>Copyright 2001-2012 Terracotta, Inc.</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>*****</p> <p>slf4j-api version 1.7.7 and slf4j-log4j12 version 1.7.7</p> <p>Copyright (c) 2004-2013 QOS.ch All rights reserved.</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p> <p>*****</p> <p>Apache log4j version 1.2.16</p> <p>Copyright 2007 The Apache Software Foundation</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
The Perl Foundation	Perl 5.28.1	For a copy of the license, see <a href="#">Perl 5.28.1 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Tinkerpop	Blueprints 2.6	<p>Copyright (c) 2009-Infinity, TinkerPop [http://tinkerpop.com] All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of the TinkerPop nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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 TINKERPOP 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.</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Tinkerpop	Gremlin Console 3.3.1	<p>Copyright (c) 2009-2012, TinkerPop [<a href="http://tinkerpop.com">http://tinkerpop.com</a>] All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of the TinkerPop nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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 TINKERPOP 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.</p>
Uri Guttman	File::Slurp 9999.19	For a copy of the license, see <a href="#">File::Slurp 9999.19 License</a> .

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Various Open Source Licensors	LAPACK 3.7.1	<p>Copyright (c) 1992-2013 The University of Tennessee and The University of Tennessee Research Foundation. All rights reserved.</p> <p>Copyright (c) 2000-2013 The University of California Berkeley. All rights reserved.</p> <p>Copyright (c) 2006-2013 The University of Colorado Denver. All rights reserved.</p> <p>\$COPYRIGHT\$</p> <p>Additional copyrights may follow</p> <p>\$HEADER\$</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer listed in this license in the documentation and/or other materials provided with the distribution.</li> <li>• 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.</li> </ul> <p>The copyright holders provide no reassurances that the source code provided does not infringe any patent, copyright, or any other intellectual property rights of third parties. The copyright holders disclaim any liability to any recipient for claims brought against recipient by any third party for infringement of that parties intellectual property rights.</p> <p>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.</p>
W3C	DOM (Dom Level 3 core specification, Version 1.0)	<p>For a copy of the license, see <a href="#">DOM (Dom Level 3 core specification, Version 1.0) License</a>.</p>

**Table 2-2 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Database**

Provider	Component(s)	Licensing Information
Yann Collet	LZ4 1.8.3	<p>A LICENSE file in the root directory of the download package includes the following:</p> <p>-----</p> <p>This repository uses 2 different licenses :</p> <ul style="list-style-type: none"> <li>• all files in the `lib` directory use a BSD 2-Clause license</li> <li>• all other files use a GPLv2 license, unless explicitly stated otherwise</li> </ul> <p>Relevant license is reminded at the top of each source file, and with the presence of COPYING or LICENSE file.</p> <p>This model emphasizes the fact that only files in the `lib` directory are designed to be included into 3rd party projects.</p> <p>Other files, such as those from `programs` or `examples` directory, are not intended to be compiled outside of their context. They can serve as source of inspiration, but they should not be copy/pasted into 3rd party projects, as this scenario is not supported.</p> <p>-----</p> <p><b>LZ4 Library</b></p> <p>Copyright (c) 2011-2016, Yann Collet</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> </ul> <p>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.</p> <p>-----</p>
perl.org	Perl DBI 1.642	For a copy of the license, see <a href="#">Perl DBI 1.642 License</a> .
various	PCRE 10.23	For a copy of the license, see <a href="#">PCRE 10.23 License</a> .

## 2.2 Third-Party Notices and/or Licenses for Oracle Database Components

### 2.2.1 Commercial Software Included in Oracle Database Components

Commercial software products or components distributed in Oracle Database 19c components are identified in the following table along with the applicable licensing information.

**Table 2-3 Commercial Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Frederico Caldiera Knabben (FredCK.com)	CKEditor 4.x	© 2003 - 2010 CKSource - Frederico Knabben. All rights reserved. This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Sibental, Inc.	AnyChart 6.0 AnyGantt 4.3 AnyMap 6.0	AnyChart Flash chart support in Oracle Application Express is based on the Anychart Flash Chart Component. Anychart is a flexible Macromedia Flash-based solution that enables developers to create animated, compact, interactive flash charts. Flash charts are rendered by a browser and require Flash player 8 or later. Flash charts used in interactive reports require Flash Player 9 or later. For more information about Anychart, go to: <a href="http://www.anychart.com">http://www.anychart.com</a> Any attempt to unbundle the AnyChart Flash Chart Component from an Oracle product, or to use the AnyChart Flash Chart Component outside of the Oracle product will be in violation of this license and will result in the immediate termination of this license.

### 2.2.2 Open Source or Other Separately Licensed Software Included in Oracle Database Components

Required notices for open source or other separately licensed software products or components distributed in Oracle Database 19c components are identified in the following tables along with the applicable licensing information. Additional notices and/or licenses may be found in the included documentation or readme files of the individual third party software.



**Table 2-4 Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Adam Shaw	FullCalendar 3.3.1	<p>Copyright (c) 2013 Adam Shaw</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Alexis Sellier	Less.js 1.7	<p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Craig Michael Thompson	qTip 2	<p>qTip2 - Pretty powerful tooltips, Version: nightly Copyright 2009-2011 Craig Michael Thompson</p> <p>Dual licensed under MIT or GPLv2 licenses</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Dave Gandy	Font Awesome 5.1.0	<p>For a copy of the license, see <a href="#">Font Awesome 5.1.0 License</a>.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Flot	Flot 0.7, 0.8.1, 0.8.2, 0.8.x	<p>Copyright © 2007 - 2013 IOLA and Ole Laursen</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
GitHub	Font Awesome 4.5	For a copy of the license, see <a href="#">Font Awesome 4.5 License</a> .
GitHub	flot-axislabels 2.0	<p>Axis Labels Plugin for flot.</p> <p><a href="http://github.com/markrcote/flot-axislabels">http://github.com/markrcote/flot-axislabels</a></p> <p>Original code is Copyright (c) 2010 Xuan Luo.</p> <p>Original code was released under the GPLv3 license by Xuan Luo, September 2010.</p> <p>Original code was rereleased under the MIT license by Xuan Luo, April 2012.</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
GitHub	jQuery-mobile-nestedlists	<p><a href="https://github.com/arschmitz/jquery-mobile-nestedlists/blob/master/LICENSE">https://github.com/arschmitz/jquery-mobile-nestedlists/blob/master/LICENSE</a></p> <p>The MIT License (MIT)</p> <p>Copyright (c) 2013 Alexander Schmitz</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
John Resig	jQuery 2.2.3	<pre> jQuery JavaScript Library v2.1.3 * http://jquery.com/ * * Includes Sizzle.js * http://sizzlejs.com/ * * Copyright 2005, 2014 jQuery Foundation, Inc. and other * contributors * Released under the MIT license * http://jquery.org/license * * Date: 2014-12-18T15:11Z */ </pre> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
John Resig	JQuery 3.1.1	<p>Copyright (c) 2011 John Resig, <a href="http://jquery.com/">http://jquery.com/</a></p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Jorik Tangelder (Eight Media)	Hammer.js 2.0.8	<p>Hammer.JS - v2.0.8 - 2016-04-23</p> <p><a href="http://hammerjs.github.io/">http://hammerjs.github.io/</a></p> <p>Copyright (c) 2016 Jorik Tangelder;</p> <p>Licensed under the MIT license</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Marijn Haverbeke	CodeMirror 5.16	<p>Copyright (C) 2016 by Marijn Haverbeke &lt;marijnh@gmail.com&gt; and others</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Michael Bostock	D3 (d3.js) 3.3.11	<p>Copyright (c) 2013, Michael Bostock</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• Neither the name of the Michael Bostock nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Michael Bostock	D3 (d3.js) 3.5.5	<p>Copyright (c) 2010-2015, Michael Bostock</p> <p>All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• The name Michael Bostock may not be used to endorse or promote products derived from this software without specific prior written permission.</li> </ul> <p>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.</p>
Modernizr	Modernizr 2.6.2	<p>Copyright (c) 2009-2013</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Oracle	JavaScript Extension Toolkit (JET) 4.2.0	<p>For a copy of the license, see <a href="#">JavaScript Extension Toolkit (JET) 4.2.0 License</a>.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
Patrick Wolf	APEX Essentials 1.0	<p>Copyright (c) 2008 Patrick Wolf (<a href="http://www.inside-oracle-apex.com/">http://www.inside-oracle-apex.com/</a>)</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
jQuery	Autocomplete plugin 1.1	<p>jQuery Autocomplete plugin 1.1 (Modified to work with Oracle Application Express)</p> <p>Copyright (c) 2009 Jörn Zaefferer</p> <p>Dual licensed under the MIT and GPL licenses:</p> <p><a href="http://www.opensource.org/licenses/mit-license.php">http://www.opensource.org/licenses/mit-license.php</a>  <a href="http://www.gnu.org/licenses/gpl.html">http://www.gnu.org/licenses/gpl.html</a>  Revision: \$Id: jquery.autocomplete.js 15 2009-08-22 10:30:27Z joern.zaefferer \$/</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
jQuery	Bgiframe plugin 2.1.1	<p>Copyright (c) 2006 Brandon Aaron</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
jQuery	Color Picker 23.05.2009	<p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>



**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
jQuery	jQuery Mobile 1.4.5	<p>Copyright 2013 jQuery Foundation and other contributors <a href="http://jquery.com/">http://jquery.com/</a></p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
jQuery	jQueryUI 1.12.0	<p>Copyright jQuery Foundation and other contributors</p> <p>This software consists of voluntary contributions made by many individuals (AUTHORS.txt, <a href="http://jqueryui.com/about">http://jqueryui.com/about</a>) For exact contribution history, see the revision history and logs, available at <a href="http://jquery-ui.googlecode.com/svn/">http://jquery-ui.googlecode.com/svn/</a>.</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
jQuery Foundation	jQuery UI 1.10.4	<p>Copyright (c) 2012 Paul Bakaus, <a href="http://jqueryui.com/">http://jqueryui.com/</a></p> <p>This software consists of voluntary contributions made by many individuals (AUTHORS.txt, <a href="http://jqueryui.com/about">http://jqueryui.com/about</a>) For exact contribution history, see the revision history and logs, available at <a href="http://jquery-ui.googlecode.com/svn/">http://jquery-ui.googlecode.com/svn/</a>.</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
jQuery Foundation	jquery-migrate 1.4.1, 3.0.0	<p>Copyright (c) 2016 JQuery Foundation</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-4 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Application Express, Release 18.2**

Provider	Component(s)	Licensing Information
justGage	justGage 1.0.x	<p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>

**Table 2-5 Open Source or Other Separately Licensed Software Included in Oracle OPatch, Release 12.2**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-annotations 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-core 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-databind 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
FasterXML, LLC	jackson-module-jaxb-annotations 2.9.5	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .

**Table 2-6 Open Source or Other Separately Licensed Software Included in Oracle ORAchk 18.4.0**

Provider	Component(s)	Licensing Information
Noah Spurrier	Pexpect 4.4	<p>This license is approved by the OSI and FSF as GPL-compatible.  <a href="http://opensource.org/licenses/isc-license.txt">http://opensource.org/licenses/isc-license.txt</a>            Copyright (c) 2013-2014, Pexpect development team            Copyright (c) 2012, Noah Spurrier &lt;noah@noah.org&gt;            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.</p> <hr/> <p>pexpect requires ptyprocess 0.5.1; ISC license:            Ptyprocess is under the ISC license, as code derived from Pexpect.  <a href="http://opensource.org/licenses/ISC">http://opensource.org/licenses/ISC</a>            Copyright (c) 2013-2014, Pexpect development team            Copyright (c) 2012, Noah Spurrier &lt;noah@noah.org&gt;            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.</p>
Python Software Foundation	Python 3.7.1	For a copy of the license, see <a href="#">Python 3.7.1 License</a> .

**Table 2-6 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle ORAchK 18.4.0**

Provider	Component(s)	Licensing Information
Thomas Kluyver	ptyprocess 0.5.1	<p>Ptyprocess is under the ISC license, as code derived from Pexpect.  <a href="http://opensource.org/licenses/ISC">http://opensource.org/licenses/ISC</a>            Copyright (c) 2013-2014, Pexpect development team            Copyright (c) 2012, Noah Spurrier &lt;noah@noah.org&gt;            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.</p>

**Table 2-7 Open Source or Other Separately Licensed Software Included in Oracle REST Data Services 18.4**

Provider	Component(s)	Licensing Information
Apache	Apache FOP 2.3	<p>Apache FOP</p> <p>Copyright 1999-2017 The Apache Software Foundation</p> <p>Licensed under Apache 2.0</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>=====</p> <p>sRGB.icc</p> <p>The zlib/libpng License</p> <p>Copyright (c) 2008 Kai-Uwe Behrmann</p> <p>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.</p> <p>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:</p> <ol style="list-style-type: none"> <li>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.</li> <li>2. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.</li> <li>3. This notice may not be removed or altered from any source distribution.</li> </ol> <p>=====</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	Avalon Framework 4.3.1	<p>Avalon Framework version 4.1.5 Copyright © 1997-2003 The Apache Software Foundation. All rights reserved. Licensed under the Apache 1.1 License Agreement. The names "Apache", "Avalon", "Excalibur", "Fortress", "Phoenix", "Merlin" and "Apache Software Foundation" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact <a href="mailto:apache@apache.org">apache@apache.org</a>. This software consists of voluntary contributions made by many individuals on behalf of the Apache Software Foundation. For more information on the Apache Software Foundation, please see <a href="http://www.apache.org/">http://www.apache.org/</a></p> <p>This product is licensed under the Apache 1.1 license. See <a href="#">The Apache Software License, Version 1.1</a>.</p>
Apache	Batik SVG Toolkit 1.10	<p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	Commons FileUpload 1.3.3	<p>Apache Commons FileUpload</p> <p>Copyright 2002-2017 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-7 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle REST Data Services 18.4**

Provider	Component(s)	Licensing Information
Apache	Commons IO 2.6	<p>Apache Commons IO</p> <p>Copyright 2002-2017 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>Oracle must give recipients a copy of this license (doc)</p>
Apache	Commons Logging 1.2-0548efb	<p>Apache Commons Logging</p> <p>Copyright 2003-2016 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	XML Commons 1.3.04	<p>Apache Xerces Java</p> <p>copyright 1999-2007 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>Portions of this software were originally based on the following:</p> <ul style="list-style-type: none"> <li>• software copyright (c) 1999, IBM corporation., <a href="http://www.ibm.com">http://www.ibm.com</a>.</li> <li>• software copyright (c) 1999, Sun Microsystems., <a href="http://www.sun.com">http://www.sun.com</a>.</li> <li>• voluntary contributions made by Paul Eng on behalf of the Apache Software Foundation that were originally developed at iclick, Inc., software copyright (c) 1999.</li> </ul> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	XML Graphics Commons 2.3	<p>Apache XML Graphics Commons</p> <p>Copyright 2006-2018 The Apache Software Foundation</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Eclipse	Jetty 9.4.12	For a copy of the license, see <a href="#">Jetty 9.4.12 License</a> .
FasterXML, LLC	jackson-core 2.9.7	<p>jackson-core 2.9.7</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Google	Guava 26.0	<p>Apache License 2.0 (<a href="http://www.apache.org/licenses/LICENSE-2.0">http://www.apache.org/licenses/LICENSE-2.0</a>)</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Oracle	JavaScript Extension Toolkit (JET) 4.1.0	For a copy of the license, see <a href="#">JavaScript Extension Toolkit (JET) 4.1.0 License</a> .
PDFBox	PDFBox 2.0.12	For a copy of the license, see <a href="#">PDFBox 2.0.12 License</a> .
Shigeru Chiba	javassist 3.23.1-GA	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .

**Table 2-8 Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
Apache	Apache HC Fluent 4.5.6	For a copy of the license, see <a href="#">Apache HC Fluent 4.5.6 License</a> .
Apache	Commons Codec 1.11	<p>Apache Commons Codec</p> <p>Copyright 2002-2014 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java contains test data from <a href="http://aspell.net/test/orig/batch0.tab">http://aspell.net/test/orig/batch0.tab</a>.</p> <p>Copyright (C) 2002 Kevin Atkinson (<a href="mailto:kevina@gnu.org">kevina@gnu.org</a>)</p> <p>=====</p> <p>The content of package org.apache.commons.codec.language.bm has been translated from the original php source code available at <a href="http://stevemorse.org/phoneticinfo.htm">http://stevemorse.org/phoneticinfo.htm</a> with permission from the original authors.</p> <p>Original source copyright:</p> <p>Copyright (c) 2008 Alexander Beider &amp; Stephen P. Morse.</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>Oracle must give recipients a copy of this license (doc)</p>
Apache	Commons IO 2.5	<p>Apache Commons IO</p> <p>Copyright 2002-2017 The Apache Software Foundation</p> <p>This product includes software developed by The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Apache	Commons Lang 3.8.1	<p>LICENSE:</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>-----</p> <p>COPYRIGHT:</p> <p>Ships with following notice file:</p> <p>Apache Commons Lang</p> <p>Copyright 2001-2018 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p>
Apache	Groovy 2.4.15	<p>Apache Groovy</p> <p>Copyright 2003-2018 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This product bundles icons from the famfamfam.com silk icons set <a href="http://www.famfamfam.com/lab/icons/silk/">http://www.famfamfam.com/lab/icons/silk/</a></p> <p>Licensed under the Creative Commons Attribution Licence v2.5 <a href="http://creativecommons.org/licenses/by/2.5/">http://creativecommons.org/licenses/by/2.5/</a></p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>



**Table 2-8 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
Apache	HttpComponents HttpClient 4.5.6	For a copy of the license, see <a href="#">HttpComponents HttpClient 4.5.6 License</a> .
Apache	HttpCore 4.4.10	For a copy of the license, see <a href="#">HttpCore 4.4.10 License</a> .
Apache	Log4J 2.11.0	<p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>From: 'Oracle' (<a href="http://www.oracle.com">http://www.oracle.com</a>)</p> <ul style="list-style-type: none"> <li>JavaMail API (<a href="http://javaee.github.io/javamail/javax.mail">http://javaee.github.io/javamail/javax.mail</a>) com.sun.mail:javax.mail:jar:1.6.1 License: CDDL/GPLv2+CE (<a href="https://javaee.github.io/javamail/LICENSE">https://javaee.github.io/javamail/LICENSE</a>)</li> </ul> <p>From: 'The Apache Software Foundation' (<a href="https://www.apache.org/">https://www.apache.org/</a>)</p> <ul style="list-style-type: none"> <li>Apache Commons Compress (<a href="http://commons.apache.org/proper/commons-compress/">http://commons.apache.org/proper/commons-compress/</a>) org.apache.commons:commons-compress:jar:1.16.1 License: Apache License, Version 2.0 (<a href="https://www.apache.org/licenses/LICENSE-2.0.txt">https://www.apache.org/licenses/LICENSE-2.0.txt</a>)</li> <li>Apache Commons CSV (<a href="http://commons.apache.org/proper/commons-csv/">http://commons.apache.org/proper/commons-csv/</a>) org.apache.commons:commons-csv:jar:1.5 License: Apache License, Version 2.0 (<a href="https://www.apache.org/licenses/LICENSE-2.0.txt">https://www.apache.org/licenses/LICENSE-2.0.txt</a>)</li> <li>Apache Log4j API (<a href="https://logging.apache.org/log4j/2.x/log4j-api/">https://logging.apache.org/log4j/2.x/log4j-api/</a>) org.apache.logging.log4j:log4j-api:jar:2.11.0 License: Apache License, Version 2.0 (<a href="https://www.apache.org/licenses/LICENSE-2.0.txt">https://www.apache.org/licenses/LICENSE-2.0.txt</a>)</li> </ul> <p>From: 'xerial.org'</p> <ul style="list-style-type: none"> <li>snappy-java (<a href="https://github.com/xerial/snappy-java">https://github.com/xerial/snappy-java</a>) org.xerial.snappy:snappy-java:bundle:1.1.4 License: The Apache Software License, Version 2.0 (<a href="http://www.apache.org/licenses/LICENSE-2.0.txt">http://www.apache.org/licenses/LICENSE-2.0.txt</a>)</li> </ul>

**Table 2-8 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
Apache	Tomcat 9.0.8	<p>Apache Tomcat</p> <p>Copyright 1999-2017 The Apache Software Foundation</p> <p>This product includes software developed at The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>This software contains code derived from netty-native developed by the Netty project (<a href="http://netty.io">http://netty.io</a>, <a href="https://github.com/netty/netty-tnative/">https://github.com/netty/netty-tnative/</a>) and from finagle-native developed at Twitter (<a href="https://github.com/twitter/finagle">https://github.com/twitter/finagle</a>).</p> <p>The Windows Installer is built with the Nullsoft Scriptable Install System (NSIS), which is open source software. The original software and related information is available at <a href="http://nsis.sourceforge.net">http://nsis.sourceforge.net</a>.</p> <p>Java compilation software for JSP pages is provided by the Eclipse JDT Core Batch Compiler component, which is open source software. The original software and related information is available at <a href="http://www.eclipse.org/jdt/core/">http://www.eclipse.org/jdt/core/</a>.</p> <p>For portions of the Tomcat JNI OpenSSL API and the OpenSSL JSSE integration</p> <p>The org.apache.tomcat.jni and the org.apache.tomcat.net.openssl packages are derivative work originating from the Netty project and the finagle-native project developed at Twitter</p> <ul style="list-style-type: none"> <li>• Copyright 2014 The Netty Project</li> <li>• Copyright 2014 Twitter</li> </ul> <p>The original XML Schemas for Java EE Deployment Descriptors:</p> <ul style="list-style-type: none"> <li>• javaee_5.xsd</li> <li>• javaee_web_services_1_2.xsd</li> <li>• javaee_web_services_client_1_2.xsd</li> <li>• javaee_6.xsd</li> <li>• javaee_web_services_1_3.xsd</li> <li>• javaee_web_services_client_1_3.xsd</li> <li>• jsp_2_2.xsd</li> <li>• web-app_3_0.xsd</li> <li>• web-common_3_0.xsd</li> <li>• web-fragment_3_0.xsd</li> <li>• javaee_7.xsd</li> <li>• javaee_web_services_1_4.xsd</li> <li>• javaee_web_services_client_1_4.xsd</li> <li>• jsp_2_3.xsd</li> <li>• web-app_3_1.xsd</li> <li>• web-common_3_1.xsd</li> <li>• web-fragment_3_1.xsd</li> </ul> <p>may be obtained from: <a href="http://www.oracle.com/webfolder/technetwork/jsc/xml/ns/javaee/index.html">http://www.oracle.com/webfolder/technetwork/jsc/xml/ns/javaee/index.html</a></p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>

**Table 2-8 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
Apache	commons-vfs 2.2	<p>Source URL: <a href="https://github.com/apache/commons-vfs/tree/commons-vfs2-project-2.2">https://github.com/apache/commons-vfs/tree/commons-vfs2-project-2.2</a></p> <p>Apache License URL: <a href="https://github.com/apache/commons-vfs/blob/commons-vfs2-project-2.2/LICENSE.txt">https://github.com/apache/commons-vfs/blob/commons-vfs2-project-2.2/LICENSE.txt</a></p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>Copyright URL: <a href="https://github.com/apache/commons-vfs/blob/commons-vfs2-project-2.2/NOTICE.txt">https://github.com/apache/commons-vfs/blob/commons-vfs2-project-2.2/NOTICE.txt</a></p> <p>Apache Commons VFS</p> <p>Copyright 2002-2017 The Apache Software Foundation</p> <p>This product includes software developed at</p> <p>The Apache Software Foundation (<a href="http://www.apache.org/">http://www.apache.org/</a>).</p> <p>***No fourth party dependencies****</p>
FasterXML, LLC	jackson-annotations 2.9.7	<p>jackson-annotations 2.9.7</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
FasterXML, LLC	jackson-core 2.9.7	<p>jackson-core 2.9.7</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
FasterXML, LLC	jackson-databind 2.9.8	<p>jackson-databind 2.9.7</p> <p>COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi</p> <p>LICENSE: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>COPYRIGHT NOTICE</p> <p># Jackson JSON processor</p> <p>Jackson is a high-performance, Free/Open Source JSON processing library. It was originally written by Tatu Saloranta (tatu.saloranta@iki.fi), and has been in development since 2007. It is currently developed by a community of developers, as well as supported commercially by FasterXML.com.</p> <p>## Licensing</p> <p>Jackson core and extension components may be licensed under different licenses. To find the details that apply to this artifact see the accompanying LICENSE file. For more information, including possible other licensing options, contact FasterXML.com (<a href="http://fasterxml.com">http://fasterxml.com</a>).</p> <p>## Credits</p> <p>A list of contributors may be found from CREDITS file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.</p>

**Table 2-8 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
FasterXML, LLC	jackson-dataformat-yaml 2.9.7	<p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p> <p>4TH Party Dependency license: Apache 2.0</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Google	Guava 26.0	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Google	Guice 4.2.2	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
Marc Prud'hommeaux	JLine 2.14.6	<p>Copyright (c) 2002-2016, the original author or authors.</p> <p>All rights reserved.</p> <p><a href="http://www.opensource.org/licenses/bsd-license.php">http://www.opensource.org/licenses/bsd-license.php</a></p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ul style="list-style-type: none"> <li>• Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>• 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.</li> <li>• 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.</li> </ul> <p>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.</p> <p>--</p> <p>jansi 1.12</p> <p>Apache License</p> <p>This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a>.</p>
Metaborg	Spoofax (uber) 2.5.1	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .

**Table 2-8 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Spatial and Graph 19.2 (Property Graph in-memory analyst)**

Provider	Component(s)	Licensing Information
QOS.ch	SLF4J 1.7.25	<p>Copyright (c) 2004-2013 QOS.ch</p> <p>All rights reserved.</p> <p>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:</p> <p>The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.</p> <p>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.</p>
Sebastiano Vigna	fastutil 8.1.1	This product is licensed under the Apache 2.0 license. See <a href="#">The Apache Software License, Version 2.0</a> .
SkyMind	DeepLearning4j 0.9.1	For a copy of the license, see <a href="#">DeepLearning4j 0.9.1 License</a> .
SkyMind	ND4J 0.9.1	For a copy of the license, see <a href="#">ND4J 0.9.1 License</a> .

**Table 2-9 Open Source or Other Separately Licensed Software Included in Oracle Universal Installer, Release 12.2**

Provider	Component(s)	Licensing Information
Infozip	zip 3.0	For a copy of the license, see <a href="#">zip 3.0 License</a> .

**Table 2-9 (Cont.) Open Source or Other Separately Licensed Software Included in Oracle Universal Installer, Release 12.2**

Provider	Component(s)	Licensing Information
JCraft	JSch 0.1.54	<p>Copyright (c) 2002-2015 Atsuhiko Yamanaka, JCraft, Inc. All rights reserved.</p> <p>Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:</p> <ol style="list-style-type: none"> <li>1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> <li>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.</li> <li>3. The names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.</li> </ol> <p>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 JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE 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.</p>

## 2.3 Written Offer for Source Code

For third party technology that you receive from Oracle in binary form which is licensed under an open source license that gives you the right to receive the source code for that binary, you can obtain a copy of the applicable source code from [this page](#). If the source code for the technology was not provided to you with the binary, you can also receive a copy of the source code on physical media by submitting a written request to:

Oracle America, Inc.  
Attn: Associate General Counsel  
Development and Engineering Legal  
500 Oracle Parkway, 10th Floor  
Redwood Shores, CA 94065

Or, you may send an email to Oracle using [this form](#). Your request should include:

The name of the component or binary file(s) for which you are requesting the source code  
The name and version number of the Oracle product  
The date you received the Oracle product  
Your name  
Your company name (if applicable)  
Your return mailing address and email

A telephone number in the event we need to reach you.

We may charge you a fee to cover the cost of physical media and processing. Your request must be sent (i) within three (3) years of the date you received the Oracle product that included the component or binary file(s) that are the subject of your request, or (ii) in the case of code licensed under the GPL v3, for as long as Oracle offers spare parts or customer support for that product model.

# A

## Open Source Software License Text

### A.1 Apache Commons Math 3.6.1 License

Apache Commons Math

Copyright 2001-2012 The Apache Software Foundation

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

This product is licensed under the Apache 2.0 license. See "[The Apache Software License, Version 2.0](#)".

Apache Commons Math includes the following code provided to the ASF under the Apache License 2.0:

- The inverse error function implementation in the Erf class is based on CUDA code developed by Mike Giles, Oxford-Man Institute of Quantitative Finance, and published in GPU Computing Gems, volume 2, 2010 (grant received on March 23th 2013)
- The LinearConstraint, LinearObjectiveFunction, LinearOptimizer, Relationship, SimplexSolver and SimplexTableau classes in package org.apache.commons.math3.optimization.linear include software developed by Benjamin McCann (<http://www.benmccann.com>) and distributed with the following copyright: Copyright 2009 Google Inc. (grant received on March 16th 2009)
- The class "org.apache.commons.math3.exception.util.LocalizedFormatsTest" which is an adapted version of "OrekitMessagesTest" test class for the Orekit library
- The "org.apache.commons.math3.analysis.interpolation.HermiteInterpolator" has been imported from the Orekit space flight dynamics library.

=====

#### APACHE COMMONS MATH DERIVATIVE WORKS:

The Apache commons-math library includes a number of subcomponents whose implementation is derived from original sources written in C or Fortran. License terms of the original sources are reproduced below.

=====

For the lmdcr, lmpar and qrsolv Fortran routine from minpack and translated in the LevenbergMarquardtOptimizer class in package org.apache.commons.math3.optimization.general

Original source copyright and license statement:

Minpack Copyright Notice (1999) University of Chicago. 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 the University of Chicago, as Operator of Argonne National Laboratory."  
  
Alternately, this acknowledgment may appear in the software itself, if and wherever such third-party acknowledgments normally appear.
4. WARRANTY DISCLAIMER. THE SOFTWARE IS SUPPLIED "AS IS" WITHOUT WARRANTY OF ANY KIND. THE COPYRIGHT HOLDER, THE UNITED STATES, THE UNITED STATES DEPARTMENT OF ENERGY, AND THEIR EMPLOYEES: (1) DISCLAIM ANY WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE OR NON-INFRINGEMENT, (2) DO NOT ASSUME ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS OF THE SOFTWARE, (3) DO NOT REPRESENT THAT USE OF THE SOFTWARE WOULD NOT INFRINGE PRIVATELY OWNED RIGHTS, (4) DO NOT WARRANT THAT THE SOFTWARE WILL FUNCTION UNINTERRUPTED, THAT IT IS ERROR-FREE OR THAT ANY ERRORS WILL BE CORRECTED.
5. LIMITATION OF LIABILITY. IN NO EVENT WILL THE COPYRIGHT HOLDER, THE UNITED STATES, THE UNITED STATES DEPARTMENT OF ENERGY, OR THEIR EMPLOYEES: BE LIABLE FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL OR PUNITIVE DAMAGES OF ANY KIND OR NATURE, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR LOSS OF DATA, FOR ANY REASON WHATSOEVER, WHETHER SUCH LIABILITY IS ASSERTED ON THE BASIS OF CONTRACT, TORT (INCLUDING NEGLIGENCE OR STRICT LIABILITY), OR OTHERWISE, EVEN IF ANY OF SAID PARTIES HAS BEEN WARNED OF THE POSSIBILITY OF SUCH LOSS OR DAMAGES.

=====

Copyright and license statement for the odex Fortran routine developed by E. Hairer and G. Wanner and translated in GraggBulirschStoerIntegrator class in package org.apache.commons.math3.ode.nonstiff:

Copyright (c) 2004, Ernst Hairer

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 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 and license statement for the original Mersenne twister C routines translated in MersenneTwister class in package org.apache.commons.math3.random:

Copyright (C) 1997 - 2002, Makoto Matsumoto and Takuji Nishimura,

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 names of its contributors may not 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 initial code for shuffling an array (originally in class "org.apache.commons.math3.random.RandomDataGenerator", now replaced by a method in class "org.apache.commons.math3.util.MathArrays") was inspired from the algorithm description provided in "Algorithms", by Ian Craw and John Pulham (University of Aberdeen 1999). The textbook (containing a proof that the shuffle is uniformly random) is available here: <http://citeseerx.ist.psu.edu/viewdoc/download?oi=10.1.1.173.1898&rep=rep1&type=pdf>

=====  
License statement for the direction numbers in the resource files for Sobol sequences.

-----  
Licence pertaining to sobol.cc and the accompanying sets of direction numbers

-----  
Copyright (c) 2008, Frances Y. Kuo and Stephen Joe

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 names of the copyright holders nor the names of the University of New South Wales and the University of Waikato and 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 "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 HOLDERS 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 initial commit of package "org.apache.commons.math3.ml.neuralnet" is an adapted version of code developed in the context of the Data Processing and Analysis Consortium (DPAC) of the "Gaia" project of the European Space Agency (ESA).

=====

The initial commit of the class "org.apache.commons.math3.special.BesselJ" is an adapted version of code translated from the netlib Fortran program, rjbesl <http://www.netlib.org/specfun/rjbesl> by R.J. Cody at Argonne National Laboratory (USA). There is no license or copyright statement included with the original Fortran sources.

=====

The BracketFinder (package org.apache.commons.math3.optimization.univariate) and PowellOptimizer (package org.apache.commons.math3.optimization.general) classes are based on the Python code in module "optimize.py" (version 0.5) developed by Travis E. Oliphant for the SciPy library (<http://www.scipy.org/>)

Copyright B© 2003-2009 SciPy Developers.

SciPy license

Copyright B© 2001, 2002 Enthought, Inc.

All rights reserved.

Copyright B© 2003-2013 SciPy Developers.

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 Enthought nor the names of the SciPy Developers 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 THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS 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.

=====

## A.2 Apache HC Fluent 4.5.6 License

Apache HttpComponent Fluent

Apache HttpComponents Client

Copyright 1999-2018 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

=====

Licensed to the Apache Software Foundation (ASF) under one or more contributor license agreements. See the NOTICE file distributed with this work for additional information regarding copyright ownership. The ASF licenses this file to you 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.

=====

This project includes Public Suffix List copied from <[https://publicsuffix.org/list/effective\\_tld\\_names.dat](https://publicsuffix.org/list/effective_tld_names.dat)> licensed under the terms of the Mozilla Public License, v. 2.0

Full license text: <<http://mozilla.org/MPL/2.0/>>

\*\*\*\*\*

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

This project includes Public Suffix List copied from

<[https://publicsuffix.org/list/effective\\_tld\\_names.dat](https://publicsuffix.org/list/effective_tld_names.dat)>

licensed under the terms of the Mozilla Public License, v. 2.0

Full license text: <<http://mozilla.org/MPL/2.0/>>

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 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 <http://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.

## A.3 Apache Tomcat 8.5.37 License

NOTICE file from the download package from <http://mirrors.up.pt/pub/apache/tomcat/tomcat-8/v8.5.23/src/apache-tomcat-8.5.23-src.tar.gz> (replacing information referenced to Apache Tomcat Version 8.5.20 that was here before):

Apache Tomcat

Copyright 1999-2017 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

This software contains code derived from netty-native developed by the Netty project (<http://netty.io>, <https://github.com/netty/netty-tcnative/>) and from finagle-native developed at Twitter (<https://github.com/twitter/finagle>).

The Windows Installer is built with the Nullsoft Scriptable Install System (NSIS), which is open source software. The original software and related information is available at <http://nsis.sourceforge.net>.

Java compilation software for JSP pages is provided by the Eclipse JDT Core Batch Compiler component, which is open source software. The original software and related information is available at <http://www.eclipse.org/jdt/core/>.

For portions of the Tomcat JNI OpenSSL API and the OpenSSL JSSE integration The org.apache.tomcat.jni and the org.apache.tomcat.net.openssl packages are derivative work originating from the Netty project and the finagle-native project developed at Twitter

- Copyright 2014 The Netty Project
- Copyright 2014 Twitter

The original XML Schemas for Java EE Deployment Descriptors:

- javaee\_5.xsd
- javaee\_web\_services\_1\_2.xsd
- javaee\_web\_services\_client\_1\_2.xsd
- javaee\_6.xsd
- javaee\_web\_services\_1\_3.xsd

- javaee\_web\_services\_client\_1\_3.xsd
- jsp\_2\_2.xsd
- web-app\_3\_0.xsd
- web-common\_3\_0.xsd
- web-fragment\_3\_0.xsd
- javaee\_7.xsd
- javaee\_web\_services\_1\_4.xsd
- javaee\_web\_services\_client\_1\_4.xsd
- jsp\_2\_3.xsd
- web-app\_3\_1.xsd
- web-common\_3\_1.xsd
- web-fragment\_3\_1.xsd

may be obtained from:

<http://www.oracle.com/webfolder/technetwork/jsc/xml/ns/javaee/index.html>

=====

LICENSE file from the same package:

This product is licensed under the Apache 2.0 license. See "[The Apache Software License, Version 2.0](#)".

## APACHE TOMCAT SUBCOMPONENTS

Apache Tomcat includes a number of subcomponents with separate copyright notices and license terms. Your use of these subcomponents is subject to the terms and conditions of the following licenses.

For the Eclipse JDT Core Batch Compiler (ecj-x.x.x.jar) component:

Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

### 1. DEFINITIONS

"Contribution" means:

- a. in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b. in the case of each subsequent Contributor:
  - i. changes to the Program, and
  - ii. additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

## 2. GRANT OF RIGHTS

- a. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c. Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.
- d. Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

## 3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a. it complies with the terms and conditions of this Agreement; and
- b. its license agreement:
  - i. effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
  - ii. effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
  - iii. states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and

- iv. states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a. it must be made available under this Agreement; and
- b. a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

#### 4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

#### 5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

#### 6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## 7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

For the Windows Installer component:

- All NSIS source code, plug-ins, documentation, examples, header files and graphics, with the exception of the compression modules and where otherwise noted, are licensed under the zlib/libpng license.
- The zlib compression module for NSIS is licensed under the zlib/libpng license.
- The bzip2 compression module for NSIS is licensed under the bzip2 license.
- The lzma compression module for NSIS is licensed under the Common Public License version 1.0.

zlib/libpng 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.

bzip2 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. 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.
3. Altered source versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. 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.

Julian Seward, Cambridge, UK.

jseward@acm.org

Common Public License version 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS COMMON PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

#### 1. DEFINITIONS

"Contribution" means:

- a. in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and b) in the case of each subsequent Contributor:
  - i. changes to the Program, and
  - ii. additions to the Program;



where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

## 2. GRANT OF RIGHTS

- a. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c. Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.
- d. Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

## 3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a. it complies with the terms and conditions of this Agreement; and
- b. its license agreement:
  - i. effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;



- ii. effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
- iii. states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
- iv. states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a. it must be made available under this Agreement; and
- b. a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

#### 4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

#### 5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

#### 6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## 7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against a Contributor with respect to a patent applicable to software (including a cross-claim or counterclaim in a lawsuit), then any patent licenses granted by that Contributor to such Recipient under this Agreement shall terminate as of the date such litigation is filed. In addition, if Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. IBM is the initial Agreement Steward. IBM may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

### Special exception for LZMA compression module

Igor Pavlov and Amir Szekely, the authors of the LZMA compression module for NSIS, expressly permit you to statically or dynamically link your code (or bind by name) to the files from the LZMA compression module for NSIS without subjecting your linked code to the terms of the Common Public license version 1.0. Any modifications or additions to files from the

LZMA compression module for NSIS, however, are subject to the terms of the Common Public License version 1.0.

For the following XML Schemas for Java EE Deployment Descriptors:

- javaee\_5.xsd
- javaee\_web\_services\_1\_2.xsd
- javaee\_web\_services\_client\_1\_2.xsd
- javaee\_6.xsd
- javaee\_web\_services\_1\_3.xsd
- javaee\_web\_services\_client\_1\_3.xsd
- jsp\_2\_2.xsd
- web-app\_3\_0.xsd
- web-common\_3\_0.xsd
- web-fragment\_3\_0.xsd
- javaee\_7.xsd
- javaee\_web\_services\_1\_4.xsd
- javaee\_web\_services\_client\_1\_4.xsd
- jsp\_2\_3.xsd
- web-app\_3\_1.xsd
- web-common\_3\_1.xsd
- web-fragment\_3\_1.xsd
- javaee\_8.xsd
- web-app\_4\_0.xsd
- web-common\_4\_0.xsd
- web-fragment\_4\_0.xsd

## COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL) Version 1.0

### 1. Definitions.

1.1. Contributor. means each individual or entity that creates or contributes to the creation of Modifications.

1.2. Contributor Version. means the combination of the Original Software, prior Modifications used by a Contributor (if any), and the Modifications made by that particular Contributor.

1.3. Covered Software. means (a) the Original Software, or (b) Modifications, or (c) the combination of files containing Original Software with files containing Modifications, in each case including portions thereof.

1.4. Executable. means the Covered Software in any form other than Source Code.

1.5. Initial Developer. means the individual or entity that first makes Original Software available under this License.

1.6. Larger Work. means a work which combines Covered Software or portions thereof with code not governed by the terms of this License.

1.7. License. means this document.

1.8. Licensable. means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. Modifications. means the Source Code and Executable form of any of the following:

A. Any file that results from an addition to, deletion from or modification of the contents of a file containing Original Software or previous Modifications;

B. Any new file that contains any part of the Original Software or previous Modification; or

C. Any new file that is contributed or otherwise made available under the terms of this License.

1.10. Original Software. means the Source Code and Executable form of computer software code that is originally released under this License.

1.11. Patent Claims. means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.12. Source Code. means (a) the common form of computer software code in which modifications are made and (b) associated documentation included in or with such code.

1.13. You. (or .Your.) means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License. For legal entities, .You. includes any entity which 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.

### 2.1. The Initial Developer Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, the Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer, to use, reproduce, modify, display, perform, sublicense and distribute the Original Software (or portions thereof), with or without Modifications, and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using or selling of Original Software, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Software (or portions thereof).

(c) The licenses granted in Sections 2.1(a) and (b) are effective on the date Initial Developer first distributes or otherwise makes the Original Software available to a third party under the terms of this License.

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: (1) for code that You delete from the Original Software, or (2) for infringements caused by: (i) the modification of the Original Software, or (ii) the combination of the Original Software with other software or devices.

### 2.2. Contributor Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, 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 Contributor to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof), either on an unmodified basis, with other Modifications, as Covered Software and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: (1) Modifications made by that Contributor (or portions thereof); and (2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c) The licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first distributes or otherwise makes the Modifications available to a third party.

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: (1) for any code that Contributor has deleted from the Contributor Version; (2) for infringements caused by: (i) third party modifications of Contributor Version, or (ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or (3) under Patent Claims infringed by Covered Software in the absence of Modifications made by that Contributor.

### 3. Distribution Obligations.

#### 3.1. Availability of Source Code.

Any Covered Software that You distribute or otherwise make available in Executable form must also be made available in Source Code form and that Source Code form must be distributed only under the terms of this License. You must include a copy of this License with every copy of the Source Code form of the Covered Software You distribute or otherwise make available. You must inform recipients of any such Covered Software in Executable form as to how they can obtain such Covered Software in Source Code form in a reasonable manner on or through a medium customarily used for software exchange.

#### 3.2. Modifications.

The Modifications that You create or to which You contribute are governed by the terms of this License. You represent that You believe Your Modifications are Your original creation(s) and/or You have sufficient rights to grant the rights conveyed by this License.

#### 3.3. Required Notices.

You must include a notice in each of Your Modifications that identifies You as the Contributor of the Modification. You may not remove or alter any copyright, patent or trademark notices contained within the Covered Software, or any notices of licensing or any descriptive text giving attribution to any Contributor or the Initial Developer.

#### 3.4. Application of Additional Terms.

You may not offer or impose any terms on any Covered Software in Source Code form that alters or restricts the applicable version of this License or the recipients' rights hereunder. 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 the Initial Developer or 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 the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

#### 3.5. Distribution of Executable Versions.

You may distribute the Executable form of the Covered Software under the terms of this License or under the terms of a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable form does not attempt to limit or alter the recipient's rights in the Source Code form from the rights set forth in this License. If You distribute the Covered Software in Executable form under a different license, You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

### 3.6. Larger Works.

You may create a Larger Work by combining Covered Software with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Software.

## 4. Versions of the License.

### 4.1. New Versions.

Sun Microsystems, Inc. is the initial license steward and may publish revised and/or new versions of this License from time to time. Each version will be given a distinguishing version number. Except as provided in Section 4.3, no one other than the license steward has the right to modify this License.

### 4.2. Effect of New Versions.

You may always continue to use, distribute or otherwise make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. If the Initial Developer includes a notice in the Original Software prohibiting it from being distributed or otherwise made available under any subsequent version of the License, You must distribute and make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. Otherwise, You may also choose to use, distribute or otherwise make the Covered Software available under the terms of any subsequent version of the License published by the license steward.

### 4.3. Modified Versions.

When You are an Initial Developer and You want to create a new license for Your Original Software, You may create and use a modified version of this License if You: (a) rename the license and remove any references to the name of the license steward (except to note that the license differs from this License); and (b) otherwise make it clear that the license contains terms which differ from this License.

## 5. DISCLAIMER OF WARRANTY.

COVERED SOFTWARE IS PROVIDED UNDER THIS LICENSE ON AN .AS IS. BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED SOFTWARE IS FREE OF DEFECTS, MERCHANTABLE, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. 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 THE INITIAL DEVELOPER OR ANY OTHER 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 HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

## 6. TERMINATION.



6.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

6.2. If You assert a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You assert such claim is referred to as .Participant.) alleging that the Participant Software (meaning the Contributor Version where the Participant is a Contributor or the Original Software where the Participant is the Initial Developer) directly or indirectly infringes any patent, then any and all rights granted directly or indirectly to You by such Participant, the Initial Developer (if the Initial Developer is not the Participant) and all Contributors under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively and automatically at the expiration of such 60 day notice period, unless if within such 60 day period You withdraw Your claim with respect to the Participant Software against such Participant either unilaterally or pursuant to a written agreement with Participant.

6.3. In the event of termination under Sections 6.1 or 6.2 above, all end user licenses that have been validly granted by You or any distributor hereunder prior to termination (excluding licenses granted to You by any distributor) shall survive termination.

## 7. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED SOFTWARE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY 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. U.S. GOVERNMENT END USERS.

The Covered Software is a .commercial item., as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of .commercial computer software. (as that term is defined at 48 C.F.R. ? 252.227-7014(a)(1)) and commercial computer software documentation. as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Software with only those rights set forth herein. This U.S. Government Rights clause is in lieu of, and supersedes, any other FAR, DFAR, or other clause or provision that addresses Government rights in computer software under this License.

## 9. MISCELLANEOUS.

This License represents the complete agreement concerning 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. This License shall be governed by the law of the jurisdiction specified in a notice contained within the Original Software (except to the extent applicable law, if any, provides otherwise), excluding such jurisdiction's conflict-of-law provisions. Any litigation relating to this License shall be subject to the jurisdiction of the courts located in the jurisdiction and venue specified in a notice contained within the Original Software, with the losing party responsible for costs, including, without limitation, court costs

and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License. You agree that You alone are responsible for compliance with the United States export administration regulations (and the export control laws and regulation of any other countries) when You use, distribute or otherwise make available any Covered Software.

#### 10. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

#### NOTICE PURSUANT TO SECTION 9 OF THE COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL)

The code released under the CDDL shall be governed by the laws of the State of California (excluding conflict-of-law provisions). Any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California and the state courts of the State of California, with venue lying in Santa Clara County, California.

## A.4 Archive::Zip 1.57 License

A copy of the Standard Version of Perl modules in this product is available at <https://www.oracle.com/downloads/opensource.html> or by following the directions on that page.

Some parts copyright 2006 - 2012 Adam Kennedy.

Some parts copyright 2005 Steve Peters.

Original work copyright 2000 - 2004 Ned Konz.

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

-----

Perl is free software; you can redistribute it and/or modify it under the terms of either:

- a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or
- b) the "Artistic License"

-----

- a) the GNU General Public License

#### GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

#### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

-----

b) the "Artistic License"

#### DESCRIPTION

This is "The Artistic License". It's here so that modules, programs, etc., that want to declare this as their distribution license, can link to it.

It is also one of the two licenses Perl allows itself to be redistributed and/or modified; for the other one, the GNU General Public License, see the perl/gpl.

For a copy of the license, see [Artistic License](#).

## A.5 Artistic License

The "Artistic License"

#### Preamble

The intent of this document is to state the conditions under which a Package may be copied, such that the Copyright Holder maintains some semblance of artistic control over the development of the package, while giving the users of the package the right to use and distribute the Package in a more-or-less customary fashion, plus the right to make reasonable modifications.

#### Definitions:

"Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.

"Standard Version" refers to such a Package if it has not been modified, or has been modified in accordance with the wishes of the Copyright Holder as specified below.

"Copyright Holder" is whoever is named in the copyright or copyrights for the package.

"You" is you, if you're thinking about copying or distributing this Package.

"Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)

"Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:

a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as uunet.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.

b) use the modified Package only within your corporation or organization.

c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:

a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.

b) accompany the distribution with the machine-readable source of the Package with your modifications.

c) give non-standard executables non-standard names, and clearly document the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.

d) make other distribution arrangements with the Copyright Holder.

5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own. You may embed this Package's interpreter within an executable of yours (by linking); this shall be construed as a mere form of aggregation, provided that the complete Standard Version of the interpreter is so embedded.

6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whoever generated them, and may be sold commercially, and may be aggregated with this

Package. If such scripts or library files are aggregated with this Package via the so-called "undump" or "unexec" methods of producing a binary executable image, then distribution of such an image shall neither be construed as a distribution of this Package nor shall it fall under the restrictions of Paragraphs 3 and 4, provided that you do not represent such an executable image as a Standard Version of this Package.

7. C subroutines (or comparably compiled subroutines in other languages) supplied by you and linked into this Package in order to emulate subroutines and variables of the language defined by this Package shall not be considered part of this Package, but are the equivalent of input as in Paragraph 6, provided these subroutines do not change the language in any way that would cause it to fail the regression tests for the language.

8. Aggregation of this Package with a commercial distribution is always permitted provided that the use of this Package is embedded; that is, when no overt attempt is made to make this Package's interfaces visible to the end user of the commercial distribution. Such use shall not be construed as a distribution of this Package.

9. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.

10. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

## A.6 Batik SVG Toolkit 1.10 License

From <https://xmlgraphics.apache.org/batik/license.html>:

Batik License

Batik is licensed according to the Apache License, Version 2.0, the text of which is included below.

[The Apache Software License, Version 2.0](#)

-----  
From the NOTICE text file included with Apache Batik SVG Toolkit 1.10:

Apache Batik

Copyright 1999-2018 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

This software contains code from the World Wide Web Consortium (W3C) for the Document Object Model API (DOM API) and SVG Document Type Definition (DTD).

This software contains code from the International Organisation for Standardization for the definition of character entities used in the software's documentation.

This product includes images from the Tango Desktop Project

(<http://tango.freedesktop.org/>).

This product includes images from the Pasodoble Icon Theme

(<http://www.jesusda.com/projects/pasodoble>).



-- W3C DOM documentation

xml-commons/java/external/LICENSE.dom-documentation.txt \$Id: LICENSE.dom-documentation.txt 1733420 2016-03-03 07:41:59Z gadams \$

This license came from: <http://www.w3.org/Consortium/Legal/copyright-documents-19990405>

#### W3C® DOCUMENT NOTICE AND LICENSE

Copyright © 1994-2001 World Wide Web Consortium, [World Wide Web Consortium](#), ([Massachusetts Institute of Technology](#), [Institut National de Recherche en Informatique et en Automatique](#), [Keio University](#)). All Rights Reserved. <http://www.w3.org/Consortium/Legal/>

Public documents on the W3C site are provided by the copyright holders under the following license. The software or Document Type Definitions (DTDs) associated with W3C specifications are governed by the Software Notice. By using and/or copying this document, or the W3C document from which this statement is linked, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions:

Permission to use, copy, and distribute the contents of this document, or the W3C document from which this statement is linked, in any medium for any purpose and without fee or royalty is hereby granted, provided that you include the following on ALL copies of the document, or portions thereof, that you use:

A link or URL to the original W3C document.

The pre-existing copyright notice of the original author, or if it doesn't exist, a notice of the form: "Copyright © [date-of-document] World Wide Web Consortium, (Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved. <http://www.w3.org/Consortium/Legal/>" (Hypertext is preferred, but a textual representation is permitted.)

If it exists, the STATUS of the W3C document.

When space permits, inclusion of the full text of this NOTICE should be provided. We request that authorship attribution be provided in any software, documents, or other items or products that you create pursuant to the implementation of the contents of this document, or any portion thereof.

No right to create modifications or derivatives of W3C documents is granted pursuant to this license. However, if additional requirements (documented in the Copyright FAQ) are satisfied, the right to create modifications or derivatives is sometimes granted by the W3C to individuals complying with those requirements.

THIS DOCUMENT IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, NON-INFRINGEMENT, OR TITLE; THAT THE CONTENTS OF THE DOCUMENT ARE SUITABLE FOR ANY PURPOSE; NOR THAT THE IMPLEMENTATION OF SUCH CONTENTS 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 DOCUMENT OR THE PERFORMANCE OR IMPLEMENTATION OF THE CONTENTS THEREOF.

The name and trademarks of copyright holders may NOT be used in advertising or publicity pertaining to this document or its contents without specific, written prior permission. Title to copyright in this document will at all times remain with copyright holders.

-----

This formulation of W3C's notice and license became active on April 05 1999 so as to account for the treatment of DTDs, schema's and bindings. See the older formulation for the policy prior to this date. 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](mailto:site-policy@w3.org).

webmaster

(last updated by reagle on 1999/04/99.)

-- W3C Dom software

xml-commons/java/external/LICENSE.dom-software.txt \$Id: LICENSE.dom-software.txt  
 1733420 2016-03-03 07:41:59Z gadams \$

This license came from: <http://www.w3.org/Consortium/Legal/copyright-software-19980720>

## W3C® SOFTWARE NOTICE AND LICENSE

Copyright © 1994-2001 World Wide Web Consortium, [World Wide Web Consortium](#),  
 ([Massachusetts Institute of Technology](#), [Institut National de Recherche en Informatique et en  
 Automatique](#), [Keio University](#)). All Rights Reserved. <http://www.w3.org/Consortium/Legal/>

<http://www.w3.org/Consortium/Legal/>

This W3C work (including software, documents, 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 use, 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, that you make:

The full text of this NOTICE in a location viewable to users of the redistributed or derivative work.

Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, a short notice of the following form (hypertext is preferred, text is permitted) should be used within the body of any redistributed or derivative code: "Copyright © [\$date-of-software] World Wide Web Consortium, (Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved <http://www.w3.org/Consortium/Legal/>"

Notice of any changes or modifications to the W3C 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 August 14 1998 so as to improve compatibility with GPL. This version ensures that W3C software licensing terms are no more restrictive than GPL and consequently W3C software may be distributed in GPL packages. See the older formulation for the policy prior to this date. 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](mailto:site-policy@w3.org).

webmaster

(last updated \$Date: 2002-12-09 09:15:21 -0700 (Mon, 09 Dec 2002) \$)

-- FOP transcoder

The fop-transcoder-allinone-2.1.jar file is licensed under the Apache License 2.0, which can be found in the distribution root directory in the LICENSE file.

-- JS Rhino

This distribution includes a binary distribution of Mozilla Rhino 1.6 release 5 plus one patch.

You can get the unpatched 1.6R5 release of Rhino from the following URL:

[ftp://ftp.mozilla.org/pub/mozilla.org/js/rhino1\\_6R5.zip](ftp://ftp.mozilla.org/pub/mozilla.org/js/rhino1_6R5.zip)

To obtain the source code for the 1.6R5 release of Rhino, issue the following commands:

```
cvs -d :pserver:anonymous@cvs-mirror.mozilla.org:/cvsroot \  
co -D2006-11-20 mozilla/js/rhino
```

The patch is available here:

<https://bugzilla.mozilla.org/attachment.cgi?id=288467>

which is attached to this bug:

[https://bugzilla.mozilla.org/show\\_bug.cgi?id=367627](https://bugzilla.mozilla.org/show_bug.cgi?id=367627)

Rhino is licensed under both the MPL (Mozilla Public License) 1.1 and the GPL (GNU General Public License) 2.0, which are duplicated below.

The Rhino jar also includes four classes:

`org.mozilla.javascript.tools.debugger.downloaded.AbstractCellEditor.java`

`org.mozilla.javascript.tools.debugger.downloaded.JTreeTable.java`

`org.mozilla.javascript.tools.debugger.downloaded.TreeTableModel.java`

`org.mozilla.javascript.tools.debugger.downloaded.TreeTableModelAdapter.java`

Which come from:

<http://java.sun.com/products/jfc/tsc/articles/treetable2>

Under the following license:

Code sample

License

Copyright 1994-2006 Sun Microsystems, 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:

- Redistribution of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistribution 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 Sun Microsystems, Inc. or 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 "AS IS," without a warranty of any kind. ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT, ARE HEREBY EXCLUDED. SUN MICROSYSTEMS, INC. ("SUN") AND ITS LICENSORS SHALL NOT BE LIABLE FOR ANY DAMAGES SUFFERED BY LICENSEE AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THIS SOFTWARE OR ITS DERIVATIVES. IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR DIRECT, INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF THE USE OF OR INABILITY TO USE THIS SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

You acknowledge that this software is not designed, licensed or intended for use in the design, construction, operation or maintenance of any nuclear facility.

=====

## MOZILLA PUBLIC LICENSE

Version 1.1

-----

### 1. Definitions.

1.0.1. "Commercial Use" means distribution or otherwise making the Covered Code available to a third party.

1.1. "Contributor" means each entity that creates or contributes to the creation of Modifications.

1.2. "Contributor Version" means the combination of the Original Code, prior Modifications used by a Contributor, and the Modifications made by that particular Contributor.

1.3. "Covered Code" means the Original Code or Modifications or the combination of the Original Code and Modifications, in each case including portions thereof.

1.4. "Electronic Distribution Mechanism" means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5. "Executable" means Covered Code in any form other than Source Code.

1.6. "Initial Developer" means the individual or entity identified as the Initial Developer in the Source Code notice required by Exhibit A.

1.7. "Larger Work" means a work which combines Covered Code or portions thereof with code not governed by the terms of this License.

1.8. "License" means this document.

1.8.1. "Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. "Modifications" means any addition to or deletion from the substance or structure of either the Original Code or any previous Modifications. When Covered Code is released as a series of files, a Modification is:

A. Any addition to or deletion from the contents of a file containing Original Code or previous Modifications.

B. Any new file that contains any part of the Original Code or previous Modifications.

1.10. "Original Code" means Source Code of computer software code which is described in the Source Code notice required by Exhibit A as Original Code, and which, at the time of its release under this License is not already Covered Code governed by this License.

1.10.1. "Patent Claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.11. "Source Code" means the preferred form of the Covered Code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an Executable, or source code differential comparisons against either the Original Code or another well known, available Covered Code of the Contributor's choice. The Source Code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

1.12. "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which 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. Source Code License.

### 2.1. The Initial Developer Grant.

The Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license, subject to third party intellectual property claims:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer to use, reproduce, modify, display, perform, sublicense and distribute the Original Code (or portions thereof) with or without Modifications, and/or as part of a Larger Work; and

(b) under Patents Claims infringed by the making, using or selling of Original Code, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Code (or portions thereof).

(c) the licenses granted in this Section 2.1(a) and (b) are effective on the date Initial Developer first distributes Original Code under the terms of this License.

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: 1) for code that You delete from the Original Code; 2) separate from the Original Code; or 3) for infringements caused by: i) the modification of the Original Code or ii) the combination of the Original Code with other software or devices.

### 2.2. Contributor Grant.

Subject to third party intellectual property claims, 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 Contributor, to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof) either on an unmodified basis, with other Modifications, as Covered Code and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: 1) Modifications made by that Contributor (or portions thereof); and 2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c) the licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first makes Commercial Use of the Covered Code.

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: 1) for any code that Contributor has deleted from the Contributor Version; 2) separate from the Contributor Version; 3) for infringements caused by: i) third party modifications of Contributor Version or ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or 4) under Patent Claims infringed by Covered Code in the absence of Modifications made by that Contributor.

### 3. Distribution Obligations.

#### 3.1. Application of License.

The Modifications which You create or to which You contribute are governed by the terms of this License, including without limitation Section 2.2. The Source Code version of Covered Code may be distributed only under the terms of this License or a future version of this License released under Section 6.1, and You must include a copy of this License with every copy of the Source Code You distribute. You may not offer or impose any terms on any Source Code version that alters or restricts the applicable version of this License or the recipients' rights hereunder. However, You may include an additional document offering the additional rights described in Section 3.5.

#### 3.2. Availability of Source Code.

Any Modification which You create or to which You contribute must be made available in Source Code form under the terms of this License either on the same media as an Executable version or via an accepted Electronic Distribution Mechanism to anyone to whom you made an Executable version available; and if made available via Electronic Distribution Mechanism, must remain available for at least twelve (12) months after the date it initially became available, or at least six (6) months after a subsequent version of that particular Modification has been made available to such recipients. You are responsible for ensuring that the Source Code version remains available even if the Electronic Distribution Mechanism is maintained by a third party.

#### 3.3. Description of Modifications.

You must cause all Covered Code to which You contribute to contain a file documenting the changes You made to create that Covered Code and the date of any change. You must include a prominent statement that the Modification is derived, directly or indirectly, from Original Code provided by the Initial Developer and including the name of the Initial Developer in (a) the Source Code, and (b) in any notice in an Executable version or related documentation in which You describe the origin or ownership of the Covered Code.

#### 3.4. Intellectual Property Matters

(a) Third Party Claims.

If Contributor has knowledge that a license under a third party's intellectual property rights is required to exercise the rights granted by such Contributor under Sections 2.1 or 2.2, Contributor must include a text file with the Source Code distribution titled "LEGAL" which describes the claim and the party making the claim in sufficient detail that a recipient will know whom to contact. If Contributor obtains such knowledge after the Modification is made available as described in Section 3.2, Contributor shall promptly modify the LEGAL file in all copies Contributor makes available thereafter and shall take other steps (such as notifying appropriate mailing lists or newsgroups) reasonably calculated to inform those who received the Covered Code that new knowledge has been obtained.

(b) Contributor APIs.

If Contributor's Modifications include an application programming interface and Contributor has knowledge of patent licenses which are reasonably necessary to implement that API, Contributor must also include this information in the LEGAL file.

(c) Representations.

Contributor represents that, except as disclosed pursuant to Section 3.4(a) above, Contributor believes that Contributor's Modifications are Contributor's original creation(s) and/or Contributor has sufficient rights to grant the rights conveyed by this License.

### 3.5. Required Notices.

You must duplicate the notice in Exhibit A in each file of the Source Code. If it is not possible to put such notice in a particular Source Code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more Modification(s) You may add your name as a Contributor to the notice described in Exhibit A. You must also duplicate this License in any documentation for the Source Code where You describe recipients' rights or ownership rights relating to Covered Code. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Code. However, You may do so only on Your own behalf, and not on behalf of the Initial Developer or 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 the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

### 3.6. Distribution of Executable Versions.

You may distribute Covered Code in Executable form only if the requirements of Section 3.1-3.5 have been met for that Covered Code, and if You include a notice stating that the Source Code version of the Covered Code is available under the terms of this License, including a description of how and where You have fulfilled the obligations of Section 3.2. The notice must be conspicuously included in any notice in an Executable version, related documentation or collateral in which You describe recipients' rights relating to the Covered Code. You may distribute the Executable version of Covered Code or ownership rights under a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable version does not attempt to limit or alter the recipient's rights in the Source Code version from the rights set forth in this License. If You distribute the Executable version under a different license You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or any Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

### 3.7. Larger Works.

You may create a Larger Work by combining Covered Code with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Code.

#### 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 Code 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 included in the LEGAL file described in Section 3.4 and must be included with all distributions of the Source Code. 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. Application of this License.

This License applies to code to which the Initial Developer has attached the notice in Exhibit A and to related Covered Code.

#### 6. Versions of the License.

##### 6.1. New Versions.

Netscape Communications Corporation ("Netscape") may publish revised and/or new versions of the License from time to time. Each version will be given a distinguishing version number.

##### 6.2. Effect of New Versions.

Once Covered Code has been published under a particular version of the License, You may always continue to use it under the terms of that version. You may also choose to use such Covered Code under the terms of any subsequent version of the License published by Netscape. No one other than Netscape has the right to modify the terms applicable to Covered Code created under this License.

##### 6.3. Derivative Works.

If You create or use a modified version of this License (which you may only do in order to apply it to code which is not already Covered Code governed by this License), You must (a) rename Your license so that the phrases "Mozilla", "MOZILLAPL", "MOZPL", "Netscape", "MPL", "NPL" or any confusingly similar phrase do not appear in your license (except to note that your license differs from this License) and (b) otherwise make it clear that Your version of the license contains terms which differ from the Mozilla Public License and Netscape Public License. (Filling in the name of the Initial Developer, Original Code or Contributor in the notice described in Exhibit A shall not of themselves be deemed to be modifications of this License.)

#### 7. DISCLAIMER OF WARRANTY.

COVERED CODE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED CODE IS FREE OF DEFECTS, MERCHANTABLE, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED CODE IS WITH YOU. SHOULD ANY COVERED CODE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER 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 CODE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

#### 8. TERMINATION.



8.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. All sublicenses to the Covered Code which are properly granted shall survive any termination of this License. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

8.2. If You initiate litigation by asserting a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You file such action is referred to as "Participant") alleging that:

(a) such Participant's Contributor Version directly or indirectly infringes any patent, then any and all rights granted by such Participant to You under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively, unless if within 60 days after receipt of notice You either: (i) agree in writing to pay Participant a mutually agreeable reasonable royalty for Your past and future use of Modifications made by such Participant, or (ii) withdraw Your litigation claim with respect to the Contributor Version against such Participant. If within 60 days of notice, a reasonable royalty and payment arrangement are not mutually agreed upon in writing by the parties or the litigation claim is not withdrawn, the rights granted by Participant to You under Sections 2.1 and/or 2.2 automatically terminate at the expiration of the 60 day notice period specified above.

(b) any software, hardware, or device, other than such Participant's Contributor Version, directly or indirectly infringes any patent, then any rights granted to You by such Participant under Sections 2.1(b) and 2.2(b) are revoked effective as of the date You first made, used, sold, distributed, or had made, Modifications made by that Participant.

8.3. If You assert a patent infringement claim against Participant alleging that such Participant's Contributor Version directly or indirectly infringes any patent where such claim is resolved (such as by license or settlement) prior to the initiation of patent infringement litigation, then the reasonable value of the licenses granted by such Participant under Sections 2.1 or 2.2 shall be taken into account in determining the amount or value of any payment or license.

8.4. In the event of termination under Sections 8.1 or 8.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or any distributor hereunder prior to termination shall survive termination.

## 9. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR 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.

## 10. U.S. GOVERNMENT END USERS.

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48

C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

# 11. MISCELLANEOUS.

This License represents the complete agreement concerning 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. This License shall be governed by California law provisions (except to the extent applicable law, if any, provides otherwise), excluding its conflict-of-law provisions. With respect to disputes in which at least one party is a citizen of, or an entity chartered or registered to do business in the United States of America, any litigation relating to this License shall be subject to the jurisdiction of the Federal Courts of the Northern District of California, with venue lying in Santa Clara County, California, with the losing party responsible for costs, including without limitation, court costs and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License.

# 12. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

# 13. MULTIPLE-LICENSED CODE.

Initial Developer may designate portions of the Covered Code as "Multiple-Licensed". "Multiple-Licensed" means that the Initial Developer permits you to utilize portions of the Covered Code under Your choice of the NPL or the alternative licenses, if any, specified by the Initial Developer in the file described in Exhibit A.

## EXHIBIT A -Mozilla Public License.

``The contents of this file are subject to the Mozilla Public License Version 1.1 (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.mozilla.org/MPL/>

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.

The Original Code is \_\_\_\_\_.

The Initial Developer of the Original Code is \_\_\_\_\_.  
 Portions created by \_\_\_\_\_ are Copyright (C) \_\_\_\_\_  
 \_\_\_\_\_. All Rights Reserved.

Contributor(s): \_\_\_\_\_.

Alternatively, the contents of this file may be used under the terms of the \_\_\_\_\_ license (the "[\_\_\_\_\_] License"), in which case the provisions of [\_\_\_\_\_] License are applicable instead of those above. If you wish to allow use of your version of this file only under the terms of the [\_\_\_\_\_] License and not to allow others to use



your version of this file under the MPL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the [\_\_\_\_] License. If you do not delete the provisions above, a recipient may use your version of this file under either the MPL or the [\_\_\_\_] License."

[NOTE: The text of this Exhibit A may differ slightly from the text of the notices in the Source Code files of the Original Code. You should use the text of this Exhibit A rather than the text found in the Original Code Source Code for Your Modifications.]

=====

## 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.

=====

-- SAX Parser

xml-commons/java/external/LICENSE.sax.txt \$Id: LICENSE.sax.txt 1733420 2016-03-03 07:41:59Z gadams \$

This license came from: <http://www.megginson.com/SAX/copying.html>

However please note future versions of SAX may be covered under <http://saxproject.org/?selected=pd>

This page is now out of date -- see the new SAX site at <http://www.saxproject.org/> for more up-to-date releases and other information. Please change your bookmarks.

SAX2 is Free!

I hereby abandon any property rights to SAX 2.0 (the Simple API for XML), and release all of the SAX 2.0 source code, compiled code, and documentation contained in this distribution into the Public Domain. SAX comes with NO WARRANTY or guarantee of fitness for any purpose.

David Megginson, [david@megginson.com](mailto:david@megginson.com)

2000-05-05

-- Xalan

The xalan-2.7.0.jar file is licensed under the Apache License 2.0, which can be found in the distribution root directory in the LICENSE file.

-- Xml Graphics Commons

[The Apache Software License, Version 2.0.](#)

-- Xerces

The xerces\_2\_5\_0.jar file comes from the Apache Xerces project (<http://xml.apache.org/dist/xerces-j/>), and is licensed under the Apache Software License, Version 1.1, which is reproduced below.

```
/*
 * The Apache Software License, Version 1.1
 *
 *
 * Copyright (c) 1999-2002 The Apache Software Foundation. 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 the
*     Apache Software Foundation (http://www.apache.org/)."
* Alternately, this acknowledgment may appear in the software itself,
* if and wherever such third-party acknowledgments normally appear.
*
* 4. The names "Xerces" and "Apache Software Foundation" must
* not be used to endorse or promote products derived from this
* software without prior written permission. For written
* permission, please contact apache@apache.org.
*
* 5. Products derived from this software may not be called "Apache",
* nor may "Apache" appear in their name, without prior written
* permission of the Apache Software Foundation.
*
* 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 APACHE SOFTWARE FOUNDATION 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 software consists of voluntary contributions made by many
* individuals on behalf of the Apache Software Foundation and was
* originally based on software copyright (c) 1999, International
* Business Machines, Inc., http://www.ibm.com. For more
* information on the Apache Software Foundation, please see
* <http://www.apache.org/>.
*/
```

## A.7 Compress::Raw::Zlib 2.081 License

A copy of the Standard Version of Perl modules in this product is available at <https://www.oracle.com/downloads/opensource.html> or by following the directions on that page.

Copyright (c) 2005-2018 Paul Marquess. All rights reserved.

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

-----

Perl is free software; you can redistribute it and/or modify it under the terms of either:



a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or

b) the "Artistic License"

-----

a) the GNU General Public License

## GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".



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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

4. You may not copy, modify, sublicense, distribute or transfer the Program except as expressly provided under this General Public License. Any attempt otherwise to copy, modify, sublicense, distribute or transfer the Program is void, and will automatically terminate your rights to use the Program under this License. However, parties who have received copies, or rights to use

copies, from you under this General Public License will not have their licenses terminated so long as such parties remain in full compliance.

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

#### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

-----

b) the "Artistic License"

DESCRIPTION

This is "The Artistic License". It's here so that modules, programs, etc., that want to declare this as their distribution license, can link to it.

It is also one of the two licenses Perl allows itself to be redistributed and/or modified; for the other one, the GNU General Public License, see the perl/gpl.

For a copy of the license, see [Artistic License](#).

## A.8 DBD-Oracle 1.76 License

This software is copyright (c) 2018, 2014, 2013, 2012, 2011, 2010 by Tim Bunce.

This is free software; you can redistribute it and/or modify it under the same terms as the Perl 5 programming language system itself.

Terms of the Perl programming language system itself

a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or

b) the "Artistic License"

--- The GNU General Public License, Version 1, February 1989 ---

This software is Copyright (c) 2018, 2014, 2013, 2012, 2011, 2010 by Tim Bunce.

This is free software, licensed under:

The GNU General Public License, Version 1, February 1989

GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

--- The Artistic License 1.0 ---

This software is Copyright (c) 2018, 2014, 2013, 2012, 2011, 2010 by Tim Bunce.

This is free software, licensed under:

The Artistic License 1.0

For a copy of the license, see [Artistic License](#).

## A.9 DOM (Dom Level 3 core specification, Version 1.0) License

### W3C® SOFTWARE NOTICE AND LICENSE

<http://www.w3.org/Consortium/Legal/2002/copyright-software-20021231>

Copyright © 2004 World Wide Web Consortium, (Massachusetts Institute of Technology, European Research Consortium for Informatics and Mathematics, Keio University, Beihang). All Rights Reserved. This work is distributed under the W3C® Software License [1] 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.

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 <copyright-software-short-notice-20021231.html> 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 <<http://www.w3.org/Consortium/Legal/copyright-software-19980720>> and is written so as to preserve the Free



Software Foundation's assessment of GPL compatibility <<http://www.gnu.org/philosophy/license-list.html#GPLCompatibleLicenses>> and OSI's certification <<http://www.opensource.org/licenses/W3C.php>> under the Open Source Definition <<http://www.opensource.org/docs/definition.php>>. Please see our Copyright FAQ <<http://www.w3.org/Consortium/Legal/IPR-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](mailto:site-policy@w3.org) <<mailto:site-policy@w3.org>>.

## A.10 DeepLearning4j 0.9.1 License

Copyright 2015 Skywind, Inc.

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

\*\*\*\*\*

As used in PGX, DeepLearning4j includes the following fourth party dependencies

nd4j-native-api v. 0.9.1

Copyright 2015 Skywind, Inc.

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.

deeplearning4j-core v. 0.9.1

Copyright 2015 Skywind, Inc.

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.

deeplearning4j-nn v. 0.9.1

Copyright 2015 Skywind, Inc.

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.

nd4j-jackson v. 0.9.1

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

commons-lang3 v. 3.4

Copyright 2001-2015 The Apache Software Foundation

This product includes software developed at The Apache Software Foundation (<http://www.apache.org/>).

This product includes software from the Spring Framework, under the Apache License 2.0 (see: `StringUtils.containsWhitespace()`)

javacpp v. 1.3.3

You may use this work under the terms of either the Apache License, Version 2.0, or the GNU General Public License (GPL), either version 2, or any later version, with "Classpath" exception (details below).

You don't have to do anything special to choose one license or the other and you don't have to notify anyone which license you are using. You are free to use this work in any project (even commercial projects) as long as the copyright header is left intact.

=====

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

## 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.

#### "CLASSPATH" EXCEPTION TO THE GPL

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.

reflections v. 0.9.11

License and copyright URL: <https://github.com/ronmamo/reflections/blob/0.9.11/COPYING.txt>

DO WHAT THE FUCK YOU WANT TO PUBLIC LICENSE

Version 2, December 2004

Copyright (C) 2004 Sam Hocevar <sam@hocevar.net>

Everyone is permitted to copy and distribute verbatim or modified copies of this license document, and changing it is allowed as long as the name is changed.

DO WHAT THE FUCK YOU WANT TO PUBLIC LICENSE

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. You just DO WHAT THE FUCK YOU WANT TO.

## A.11 File::Slurp 9999.19 License

A copy of the Standard Version of Perl modules in this product is available at <https://www.oracle.com/downloads/opensource.html> or by following the directions on that page.

Perl is free software; you can redistribute it and/or modify it under the terms of either:

a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or

b) the "Artistic License"

-----

a) the GNU General Public License

GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains;

but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

-----

b) the "Artistic License"

### DESCRIPTION

This is "The Artistic License". It's here so that modules, programs, etc., that want to declare this as their distribution license, can link to it.

It is also one of the two licenses Perl allows itself to be redistributed and/or modified; for the other one, the GNU General Public License, see the [perlgpl](#).

For a copy of the license, see [Artistic License](#).

## A.12 Font Awesome 4.5 License

### SIL OPEN FONT LICENSE

Version 1.1 - 26 February 2007

#### PREAMBLE

The goals of the Open Font License (OFL) are to stimulate worldwide development of collaborative font projects, to support the font creation efforts of academic and linguistic communities, and to provide a free and open framework in which fonts may be shared and improved in partnership with others.

The OFL allows the licensed fonts to be used, studied, modified and redistributed freely as long as they are not sold by themselves. The fonts, including any derivative works, can be bundled, embedded, redistributed and/or sold with any software provided that any reserved names are not used by derivative works. The fonts and derivatives, however, cannot be released under any other type of license. The requirement for fonts to remain under this license does not apply to any document created using the fonts or their derivatives.

#### DEFINITIONS

"Font Software" refers to the set of files released by the Copyright Holder(s) under this license and clearly marked as such. This may include source files, build scripts and documentation.

"Reserved Font Name" refers to any names specified as such after the copyright statement(s).

"Original Version" refers to the collection of Font Software components as distributed by the Copyright Holder(s).

"Modified Version" refers to any derivative made by adding to, deleting, or substituting — in part or in whole — any of the components of the Original Version, by changing formats or by porting the Font Software to a new environment.

"Author" refers to any designer, engineer, programmer, technical writer or other person who contributed to the Font Software.

#### PERMISSION & CONDITIONS

Permission is hereby granted, free of charge, to any person obtaining a copy of the Font Software, to use, study, copy, merge, embed, modify, redistribute, and sell modified and unmodified copies of the Font Software, subject to the following conditions:

1. Neither the Font Software nor any of its individual components, in Original or Modified Versions, may be sold by itself.
2. Original or Modified Versions of the Font Software may be bundled, redistributed and/or sold with any software, provided that each copy contains the above copyright notice and this license. These can be included either as stand-alone text files, human-readable headers or in the appropriate machine-readable metadata fields within text or binary files as long as those fields can be easily viewed by the user.
3. No Modified Version of the Font Software may use the Reserved Font Name(s) unless explicit written permission is granted by the corresponding Copyright Holder. This restriction only applies to the primary font name as presented to the users.

4. The name(s) of the Copyright Holder(s) or the Author(s) of the Font Software shall not be used to promote, endorse or advertise any Modified Version, except to acknowledge the contribution(s) of the Copyright Holder(s) and the Author(s) or with their explicit written permission.
5. The Font Software, modified or unmodified, in part or in whole, must be distributed entirely under this license, and must not be distributed under any other license. The requirement for fonts to remain under this license does not apply to any document created using the Font Software.

#### TERMINATION

This license becomes null and void if any of the above conditions are not met.

#### DISCLAIMER

THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Font Awesome CSS, LESS, and SASS files were received under the following 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 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 NON-INFRINGEMENT. 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.

## A.13 Font Awesome 5.1.0 License

#### SIL OPEN FONT LICENSE

Version 1.1 - 26 February 2007

#### PREAMBLE

The goals of the Open Font License (OFL) are to stimulate worldwide development of collaborative font projects, to support the font creation efforts of academic and linguistic communities, and to provide a free and open framework in which fonts may be shared and improved in partnership with others.

The OFL allows the licensed fonts to be used, studied, modified and redistributed freely as long as they are not sold by themselves. The fonts, including any derivative works, can be

bundled, embedded, redistributed and/or sold with any software provided that any reserved names are not used by derivative works. The fonts and derivatives, however, cannot be released under any other type of license. The requirement for fonts to remain under this license does not apply to any document created using the fonts or their derivatives.

## DEFINITIONS

"Font Software" refers to the set of files released by the Copyright Holder(s) under this license and clearly marked as such. This may include source files, build scripts and documentation.

"Reserved Font Name" refers to any names specified as such after the copyright statement(s).

"Original Version" refers to the collection of Font Software components as distributed by the Copyright Holder(s).

"Modified Version" refers to any derivative made by adding to, deleting, or substituting — in part or in whole — any of the components of the Original Version, by changing formats or by porting the Font Software to a new environment.

"Author" refers to any designer, engineer, programmer, technical writer or other person who contributed to the Font Software.

## PERMISSION & CONDITIONS

Permission is hereby granted, free of charge, to any person obtaining a copy of the Font Software, to use, study, copy, merge, embed, modify, redistribute, and sell modified and unmodified copies of the Font Software, subject to the following conditions:

1. Neither the Font Software nor any of its individual components, in Original or Modified Versions, may be sold by itself.
2. Original or Modified Versions of the Font Software may be bundled, redistributed and/or sold with any software, provided that each copy contains the above copyright notice and this license. These can be included either as stand-alone text files, human-readable headers or in the appropriate machine-readable metadata fields within text or binary files as long as those fields can be easily viewed by the user.
3. No Modified Version of the Font Software may use the Reserved Font Name(s) unless explicit written permission is granted by the corresponding Copyright Holder. This restriction only applies to the primary font name as presented to the users.
4. The name(s) of the Copyright Holder(s) or the Author(s) of the Font Software shall not be used to promote, endorse or advertise any Modified Version, except to acknowledge the contribution(s) of the Copyright Holder(s) and the Author(s) or with their explicit written permission.
5. The Font Software, modified or unmodified, in part or in whole, must be distributed entirely under this license, and must not be distributed under any other license. The requirement for fonts to remain under this license does not apply to any document created using the Font Software.

## TERMINATION

This license becomes null and void if any of the above conditions are not met.

## DISCLAIMER

THE FONT SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OF COPYRIGHT, PATENT, TRADEMARK, OR OTHER RIGHT. IN NO EVENT SHALL THE COPYRIGHT HOLDER BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, INCLUDING ANY GENERAL, SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL



DAMAGES, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF THE USE OR INABILITY TO USE THE FONT SOFTWARE OR FROM OTHER DEALINGS IN THE FONT SOFTWARE.

Font Awesome CSS, LESS, and SASS files were received under the following 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 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.

## A.14 GeoNames Data 1.1.11 License

This distribution includes and/or the service uses a modified version of the GeoNames geographical database {For distributions: which may be found in the following file: INSERT FILE NAME}. The original GeoNames database is available at [www.geonames.org](http://www.geonames.org) under the license set forth below.

CREATIVE COMMONS CORPORATION IS NOT A LAW FIRM AND DOES NOT PROVIDE LEGAL SERVICES. DISTRIBUTION OF THIS LICENSE DOES NOT CREATE AN ATTORNEY-CLIENT RELATIONSHIP. CREATIVE COMMONS PROVIDES THIS INFORMATION ON AN "AS-IS" BASIS. CREATIVE COMMONS MAKES NO WARRANTIES REGARDING THE INFORMATION PROVIDED, AND DISCLAIMS LIABILITY FOR DAMAGES RESULTING FROM ITS USE.

License

THE WORK (AS DEFINED BELOW) IS PROVIDED UNDER THE TERMS OF THIS CREATIVE COMMONS PUBLIC LICENSE ("CCPL" OR "LICENSE"). THE WORK IS PROTECTED BY COPYRIGHT AND/OR OTHER APPLICABLE LAW. ANY USE OF THE WORK OTHER THAN AS AUTHORIZED UNDER THIS LICENSE OR COPYRIGHT LAW IS PROHIBITED.

BY EXERCISING ANY RIGHTS TO THE WORK PROVIDED HERE, YOU ACCEPT AND AGREE TO BE BOUND BY THE TERMS OF THIS LICENSE. TO THE EXTENT THIS LICENSE MAY BE CONSIDERED TO BE A CONTRACT, THE LICENSOR GRANTS YOU THE RIGHTS CONTAINED HERE IN CONSIDERATION OF YOUR ACCEPTANCE OF SUCH TERMS AND CONDITIONS.

### 1. Definitions

"Adaptation" means a work based upon the Work, or upon the Work and other pre-existing works, such as a translation, adaptation, derivative work, arrangement of music or other alterations of a literary or artistic work, or phonogram or performance and includes cinematographic adaptations or any other form in which the Work may be recast, transformed, or adapted including in any form recognizably derived from the original, except that a work that constitutes a Collection will not be considered an Adaptation for the

purpose of this License. For the avoidance of doubt, where the Work is a musical work, performance or phonogram, the synchronization of the Work in timed-relation with a moving image ("synching") will be considered an Adaptation for the purpose of this License.

"Collection" means a collection of literary or artistic works, such as encyclopedias and anthologies, or performances, phonograms or broadcasts, or other works or subject matter other than works listed in Section 1(f) below, which, by reason of the selection and arrangement of their contents, constitute intellectual creations, in which the Work is included in its entirety in unmodified form along with one or more other contributions, each constituting separate and independent works in themselves, which together are assembled into a collective whole. A work that constitutes a Collection will not be considered an Adaptation (as defined above) for the purposes of this License.

"Distribute" means to make available to the public the original and copies of the Work or Adaptation, as appropriate, through sale or other transfer of ownership.

"Licensor" means the individual, individuals, entity or entities that offer(s) the Work under the terms of this License.

"Original Author" means, in the case of a literary or artistic work, the individual, individuals, entity or entities who created the Work or if no individual or entity can be identified, the publisher; and in addition (i) in the case of a performance the actors, singers, musicians, dancers, and other persons who act, sing, deliver, declaim, play in, interpret or otherwise perform literary or artistic works or expressions of folklore; (ii) in the case of a phonogram the producer being the person or legal entity who first fixes the sounds of a performance or other sounds; and, (iii) in the case of broadcasts, the organization that transmits the broadcast.

"Work" means the literary and/or artistic work offered under the terms of this License including without limitation any production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression including digital form, such as a book, pamphlet and other writing; a lecture, address, sermon or other work of the same nature; a dramatic or dramatico-musical work; a choreographic work or entertainment in dumb show; a musical composition with or without words; a cinematographic work to which are assimilated works expressed by a process analogous to cinematography; a work of drawing, painting, architecture, sculpture, engraving or lithography; a photographic work to which are assimilated works expressed by a process analogous to photography; a work of applied art; an illustration, map, plan, sketch or three-dimensional work relative to geography, topography, architecture or science; a performance; a broadcast; a phonogram; a compilation of data to the extent it is protected as a copyrightable work; or a work performed by a variety or circus performer to the extent it is not otherwise considered a literary or artistic work.

"You" means an individual or entity exercising rights under this License who has not previously violated the terms of this License with respect to the Work, or who has received express permission from the Licensor to exercise rights under this License despite a previous violation.

"Publicly Perform" means to perform public recitations of the Work and to communicate to the public those public recitations, by any means or process, including by wire or wireless means or public digital performances; to make available to the public Works in such a way that members of the public may access these Works from a place and at a place individually chosen by them; to perform the Work to the public by any means or process and the communication to the public of the performances of the Work, including by public digital performance; to broadcast and rebroadcast the Work by any means including signs, sounds or images.

"Reproduce" means to make copies of the Work by any means including without limitation by sound or visual recordings and the right of fixation and reproducing fixations of the



Work, including storage of a protected performance or phonogram in digital form or other electronic medium.

2. Fair Dealing Rights. Nothing in this License is intended to reduce, limit, or restrict any uses free from copyright or rights arising from limitations or exceptions that are provided for in connection with the copyright protection under copyright law or other applicable laws.
3. License Grant. Subject to the terms and conditions of this License, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) license to exercise the rights in the Work as stated below:

- to Reproduce the Work, to incorporate the Work into one or more Collections, and to Reproduce the Work as incorporated in the Collections;
- to create and Reproduce Adaptations provided that any such Adaptation, including any translation in any medium, takes reasonable steps to clearly label, demarcate or otherwise identify that changes were made to the original Work. For example, a translation could be marked "The original work was translated from English to Spanish," or a modification could indicate "The original work has been modified.";
- to Distribute and Publicly Perform the Work including as incorporated in Collections; and,
- to Distribute and Publicly Perform Adaptations.
- For the avoidance of doubt:

Non-waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme cannot be waived, the Licensor reserves the exclusive right to collect such royalties for any exercise by You of the rights granted under this License; Waivable Compulsory License Schemes. In those jurisdictions in which the right to collect royalties through any statutory or compulsory licensing scheme can be waived, the Licensor waives the exclusive right to collect such royalties for any exercise by You of the rights granted under this License; and, Voluntary License Schemes. The Licensor waives the right to collect royalties, whether individually or, in the event that the Licensor is a member of a collecting society that administers voluntary licensing schemes, via that society, from any exercise by You of the rights granted under this License. The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. Subject to Section 8(f), all rights not expressly granted by Licensor are hereby reserved.

4. Restrictions. The license granted in Section 3 above is expressly made subject to and limited by the following restrictions:

You may Distribute or Publicly Perform the Work only under the terms of this License. You must include a copy of, or the Uniform Resource Identifier (URI) for, this License with every copy of the Work You Distribute or Publicly Perform. You may not offer or impose any terms on the Work that restrict the terms of this License or the ability of the recipient of the Work to exercise the rights granted to that recipient under the terms of the License. You may not sublicense the Work. You must keep intact all notices that refer to this License and to the disclaimer of warranties with every copy of the Work You Distribute or Publicly Perform. When You Distribute or Publicly Perform the Work, You may not impose any effective technological measures on the Work that restrict the ability of a recipient of the Work from You to exercise the rights granted to that recipient under the terms of the License. This Section 4(a) applies to the Work as incorporated in a Collection, but this does not require the Collection apart from the Work itself to be made subject to the terms of this License. If You create a Collection, upon notice from any Licensor You must, to the extent practicable, remove from the Collection any credit as required by Section 4(b), as requested. If You create an Adaptation, upon notice from any Licensor You must, to the

extent practicable, remove from the Adaptation any credit as required by Section 4(b), as requested.

If You Distribute, or Publicly Perform the Work or any Adaptations or Collections, You must, unless a request has been made pursuant to Section 4(a), keep intact all copyright notices for the Work and provide, reasonable to the medium or means You are utilizing: (i) the name of the Original Author (or pseudonym, if applicable) if supplied, and/or if the Original Author and/or Licensor designate another party or parties (e.g., a sponsor institute, publishing entity, journal) for attribution ("Attribution Parties") in Licensor's copyright notice, terms of service or by other reasonable means, the name of such party or parties; (ii) the title of the Work if supplied; (iii) to the extent reasonably practicable, the URI, if any, that Licensor specifies to be associated with the Work, unless such URI does not refer to the copyright notice or licensing information for the Work; and (iv) , consistent with Section 3(b), in the case of an Adaptation, a credit identifying the use of the Work in the Adaptation (e.g., "French translation of the Work by Original Author," or "Screenplay based on original Work by Original Author"). The credit required by this Section 4 (b) may be implemented in any reasonable manner; provided, however, that in the case of a Adaptation or Collection, at a minimum such credit will appear, if a credit for all contributing authors of the Adaptation or Collection appears, then as part of these credits and in a manner at least as prominent as the credits for the other contributing authors. For the avoidance of doubt, You may only use the credit required by this Section for the purpose of attribution in the manner set out above and, by exercising Your rights under this License, You may not implicitly or explicitly assert or imply any connection with, sponsorship or endorsement by the Original Author, Licensor and/or Attribution Parties, as appropriate, of You or Your use of the Work, without the separate, express prior written permission of the Original Author, Licensor and/or Attribution Parties.

Except as otherwise agreed in writing by the Licensor or as may be otherwise permitted by applicable law, if You Reproduce, Distribute or Publicly Perform the Work either by itself or as part of any Adaptations or Collections, You must not distort, mutilate, modify or take other derogatory action in relation to the Work which would be prejudicial to the Original Author's honor or reputation. Licensor agrees that in those jurisdictions (e.g. Japan), in which any exercise of the right granted in Section 3(b) of this License (the right to make Adaptations) would be deemed to be a distortion, mutilation, modification or other derogatory action prejudicial to the Original Author's honor and reputation, the Licensor will waive or not assert, as appropriate, this Section, to the fullest extent permitted by the applicable national law, to enable You to reasonably exercise Your right under Section 3(b) of this License (right to make Adaptations) but not otherwise.

5. Representations, Warranties and Disclaimer

UNLESS OTHERWISE MUTUALLY AGREED TO BY THE PARTIES IN WRITING, LICENSOR 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, MERCHANTIBILITY, FITNESS FOR A PARTICULAR PURPOSE, NONINFRINGEMENT, OR THE ABSENCE OF LATENT OR OTHER DEFECTS, ACCURACY, OR THE PRESENCE OF ABSENCE OF ERRORS, WHETHER OR NOT DISCOVERABLE. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES, SO SUCH EXCLUSION MAY NOT APPLY TO YOU.

6. Limitation on Liability. EXCEPT TO THE EXTENT REQUIRED BY APPLICABLE LAW, IN NO EVENT WILL LICENSOR BE LIABLE TO YOU ON ANY LEGAL THEORY FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES ARISING OUT OF THIS LICENSE OR THE USE OF THE WORK, EVEN IF LICENSOR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

7. Termination

This License and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this License. Individuals or entities who have received Adaptations or Collections from You under this License, however, will not have their licenses terminated provided such individuals or entities remain in full compliance with those licenses. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this License.

Subject to the above terms and conditions, the license granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different license terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this License (or any other license that has been, or is required to be, granted under the terms of this License), and this License will continue in full force and effect unless terminated as stated above.

## 8. Miscellaneous

Each time You Distribute or Publicly Perform the Work or a Collection, the Licensor offers to the recipient a license to the Work on the same terms and conditions as the license granted to You under this License.

Each time You Distribute or Publicly Perform an Adaptation, Licensor offers to the recipient a license to the original Work on the same terms and conditions as the license granted to You under this License.

If any provision of this License is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this License, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

No term or provision of this License shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

This License constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This License may not be modified without the mutual written agreement of the Licensor and You.

The rights granted under, and the subject matter referenced, in this License were drafted utilizing the terminology of the Berne Convention for the Protection of Literary and Artistic Works (as amended on September 28, 1979), the Rome Convention of 1961, the WIPO Copyright Treaty of 1996, the WIPO Performances and Phonograms Treaty of 1996 and the Universal Copyright Convention (as revised on July 24, 1971). These rights and subject matter take effect in the relevant jurisdiction in which the License terms are sought to be enforced according to the corresponding provisions of the implementation of those treaty provisions in the applicable national law. If the standard suite of rights granted under applicable copyright law includes additional rights not granted under this License, such additional rights are deemed to be included in the License; this License is not intended to restrict the license of any rights under applicable law.

### Creative Commons Notice

Creative Commons is not a party to this License, and makes no warranty whatsoever in connection with the Work. Creative Commons will not be liable to You or any party on any legal theory for any damages whatsoever, including without limitation any general, special, incidental or consequential damages arising in connection to this license. Notwithstanding the foregoing two (2) sentences, if Creative Commons has expressly identified itself as the Licensor hereunder, it shall have all rights and obligations of Licensor.

Except for the limited purpose of indicating to the public that the Work is licensed under the CCPL, Creative Commons does not authorize the use by either party of the trademark "Creative Commons" or any related trademark or logo of Creative Commons without the prior written consent of Creative Commons. Any permitted use will be in compliance with Creative Commons' then-current trademark usage guidelines, as may be published on its website or otherwise made available upon request from time to time. For the avoidance of doubt, this trademark restriction does not form part of this License.

Creative Commons may be contacted at <http://creativecommons.org/>.

## A.15 Geospatial Data Abstraction Library/OpenGIS Simple Features Reference Implementation (GDAL/OGR) 2.4 License

License file from <http://svn.osgeo.org/gdal/trunk/gdal/LICENSE.TXT>

### GDAL/OGR Licensing

This file attempts to include all licenses that apply within the GDAL/OGR source tree, in particular any that are supposed to be exposed to the end user for credit requirements for instance. The contents of this file can be displayed from GDAL commandline utilities using the `--license` commandline switch.

### GDAL/OGR General

In general GDAL/OGR is licensed under an MIT/X style license with the following terms:

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.

### gdal/frmts/gtiff/tif\_float.c

Copyright (c) 2002, Industrial Light & Magic, a division of Lucas Digital Ltd. 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 Industrial Light & Magic 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.

#### **gdal/frmts/hdf4/hdf-eos/\***

Copyright (C) 1996 Hughes and Applied Research Corporation

Permission to use, modify, and distribute this software and its documentation for any purpose 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.

#### **gdal/frmts/pcraster/libcsf**

Copyright (c) 1997-2003, Utrecht University

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 Utrecht 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 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.

#### **gdal/frmts/grib/degrib/\***

The degrib and g2clib source code are modified versions of code produced by NOAA NWS and are in the public domain subject to the following restrictions:

<http://www.weather.gov/im/softa.htm>

**DISCLAIMER** The United States Government makes no warranty, expressed or implied, as to the usefulness of the software and documentation for any purpose. The U.S. Government, its instrumentalities, officers, employees, and agents assumes no responsibility (1) for the use of the software and documentation listed below, or (2) to provide technical support to users.

<http://www.weather.gov/disclaimer.php>

The information on government servers are in the public domain, unless specifically annotated otherwise, and may be used freely by the public so long as you do not 1) claim it is your own (e.g. by claiming copyright for NWS information -- see below), 2) use it in a manner that implies an endorsement or affiliation with NOAA/NWS, or 3) modify it in content and then present it as official government material. You also cannot present information of your own in a way that makes it appear to be official government information.

The user assumes the entire risk related to its use of this data. NWS is providing this data "as is," and NWS disclaims any and all warranties, whether express or implied, including (without limitation) any implied warranties of merchantability or fitness for a particular purpose. In no event will NWS be liable to you or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of this data.

As required by 17 U.S.C. 403, third parties producing copyrighted works consisting predominantly of the material appearing in NWS Web pages must provide notice with such work(s) identifying the NWS material incorporated and stating that such material is not subject to copyright protection.

#### **port/cpl\_minizip\***

This is version 2005-Feb-10 of the Info-ZIP copyright and license. The definitive version of this document should be available at <ftp://ftp.info-zip.org/pub/infozip/license.html> indefinitely.

Copyright (c) 1990-2005 Info-ZIP. All rights reserved.

For the purposes of this copyright and license, "Info-ZIP" is defined as the following set of individuals: Mark Adler, John Bush, Karl Davis, Harald Denker, Jean-Michel Dubois, Jean-loup Gailly, Hunter Goatley, Ed Gordon, Ian Gorman, Chris Herborth, Dirk Haase, Greg Hartwig, Robert Heath, Jonathan Hudson, Paul Kienitz, David Kirschbaum, Johnny Lee, Onno van der Linden, Igor Mandrichenko, Steve P. Miller, Sergio Monesi, Keith Owens, George Petrov, Greg Roelofs, Kai Uwe Rommel, Steve Salisbury, Dave Smith, Steven M. Schweda, Christian Spieler, Cosmin Truta, Antoine Verheijen, Paul von Behren, Rich Wales, Mike White

This software is provided "as is," without warranty of any kind, express or implied. In no event shall Info-ZIP or its contributors be held liable for any direct, indirect, incidental, special or consequential damages arising out of the use of or inability to use 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. Redistributions of source code must retain the above copyright notice, definition, disclaimer, and this list of conditions.
2. Redistributions in binary form (compiled executables) must reproduce the above copyright notice, definition, disclaimer, and this list of conditions in documentation and/or other materials provided with the distribution. The sole exception to this condition is redistribution of a standard UnZipSFX binary (including SFXWiz) as part of a self-extracting archive; that is permitted without inclusion of this license, as long as the normal SFX banner has not been removed from the binary or disabled.
3. Altered versions--including, but not limited to, ports to new operating systems, existing ports with new graphical interfaces, and dynamic, shared, or static library versions--must be plainly marked as such and must not be misrepresented as being the original source.



Such altered versions also must not be misrepresented as being Info-ZIP releases--including, but not limited to, labeling of the altered versions with the names "Info-ZIP" (or any variation thereof, including, but not limited to, different capitalizations), "Pocket UnZip," "WiZ" or "MacZip" without the explicit permission of Info-ZIP. Such altered versions are further prohibited from misrepresentative use of the Zip-Bugs or Info-ZIP e-mail addresses or of the Info-ZIP URL(s).

4. Info-ZIP retains the right to use the names "Info-ZIP," "Zip," "UnZip," "UnZipSFX," "WiZ," "Pocket UnZip," "Pocket Zip," and "MacZip" for its own source and binary releases.

#### **gdal/ogr/ogrsrc\_frmts/dxf/intronurbs.cpp**

This code is derived from the code associated with the book "An Introduction to NURBS" by David F. Rogers. More information on the book and the code is available at: <http://www.nar-associates.com/nurbs/>

Copyright (c) 2009, David F. Rogers

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 David F. Rogers 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.

#### **gdal/alg/thinplatespline.cpp**

IEEE754 log() code derived from:

@(#)e\_log.c 1.3 95/01/18

Copyright (C) 1993 by Sun Microsystems, Inc. All rights reserved.

Developed at SunSoft, a Sun Microsystems, Inc. business. Permission to use, copy, modify, and distribute this software is freely granted, provided that this notice is preserved.

#### **gdal/alg/libqhull**

Only applies when GDAL is compiled with internal qhull support

Qhull, Copyright (c) 1993-2012

C.B. Barber

Arlington, MA

and

The National Science and Technology Research Center for

Computation and Visualization of Geometric Structures

(The Geometry Center)

University of Minnesota

email: [qhull@qhull.org](mailto:qhull@qhull.org)

This software includes Qhull from C.B. Barber and The Geometry Center. Qhull is copyrighted as noted above. Qhull is free software and may be obtained via [http](http://www.qhull.org) from [www.qhull.org](http://www.qhull.org). It may be freely copied, modified, and redistributed under the following conditions:

1. All copyright notices must remain intact in all files.
2. A copy of this text file must be distributed along with any copies of Qhull that you redistribute; this includes copies that you have modified, or copies of programs or other software products that include Qhull.
3. If you modify Qhull, you must include a notice giving the name of the person performing the modification, the date of modification, and the reason for such modification.
4. When distributing modified versions of Qhull, or other software products that include Qhull, you must provide notice that the original source code may be obtained as noted above.
5. There is no warranty or other guarantee of fitness for Qhull, it is provided solely "as is". Bug reports or fixes may be sent to [qhull\\_bug@qhull.org](mailto:qhull_bug@qhull.org); the authors may or may not act on them as they desire.

**`gdal/frmts/pdf/pdfdataset.cpp` (method `PDFiumRenderPageBitmap()`)**

Copyright 2014 PDFium 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.



**gdal/frmts/mrf/\* (apply when MRF driver included in build)**

Copyright (c) 2002-2012, California Institute of Technology.

All rights reserved. Based on Government Sponsored Research under contracts NAS7-1407 and/or NAS7-03001.

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 California Institute of Technology (Caltech), its operating division the Jet Propulsion Laboratory (JPL), the National Aeronautics and Space Administration (NASA), 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 CALIFORNIA INSTITUTE OF TECHNOLOGY 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 2014-2015 Esri

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.

## A.16 HttpComponents HttpClient 4.5.6 License

Apache httpclient 4.5.6

COPYRIGHT: Copyright 1999-2018 The Apache Software Foundation

LICENSE: Apache 2.0 + MPL 2.0

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

#### Modules:

```
fluent-hc
httpclient-cache
httpclient-osgi
httpclient-win
httpclient
httpmime
```

=====

#### 4P Dependencies:

commons-codec » commons-codec 1.10  
 COPYRIGHT: Copyright 2002-2014 The Apache Software Foundation  
 LICENSE: Apache 2.0 <https://github.com/apache/commons-codec/blob/1.10/LICENSE.txt>  
 src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java  
 contains test data from <http://aspell.net/test/orig/batch0.tab>.  
 Copyright (C) 2002 Kevin Atkinson (kevina@gnu.org)  
 The content of package org.apache.commons.codec.language.bm has been translated  
 from the original php source code available at <http://stevemorse.org/phoneticinfo.htm>  
 with permission from the original authors.  
 Original source copyright:  
 Copyright (c) 2008 Alexander Beider & Stephen P. Morse.

---

commons-logging » commons-logging 1.2  
 COPYRIGHT: Copyright 2003-2014 The Apache Software Foundation  
 LICENSE: Apache 2.0 [https://github.com/apache/commons-logging/blob/LOGGING\\_1\\_2/LICENSE.txt](https://github.com/apache/commons-logging/blob/LOGGING_1_2/LICENSE.txt)

---

org.apache.httpcomponents » httpcore 4.4.10  
 COPYRIGHT: Copyright 2005-2018 The Apache Software Foundation  
 LICENSE: Apache 2.0 <https://github.com/apache/httpcomponents-core/blob/4.4.10/LICENSE.txt>

---

This project includes Public Suffix List copied from

<[https://publicsuffix.org/list/effective\\_tld\\_names.dat](https://publicsuffix.org/list/effective_tld_names.dat)>

licensed under the terms of the Mozilla Public License, v. 2.0

Full license text: <<http://mozilla.org/MPL/2.0/>>

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 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 <http://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.

## A.17 HttpComponents HttpClient 4.5.7 License

Apache httpclient 4.5.7

COPYRIGHT: Copyright 1999-2019 The Apache Software Foundation

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

This project includes Public Suffix List copied from

<[https://publicsuffix.org/list/effective\\_tld\\_names.dat](https://publicsuffix.org/list/effective_tld_names.dat)>

licensed under the terms of the Mozilla Public License, v. 2.0

Full license text: <<http://mozilla.org/MPL/2.0/>>

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 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 <http://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.

=====

#### 4P Dependencies:

commons-codec » commons-codec 1.11

COPYRIGHT: Copyright 2002-2014 The Apache Software Foundation

LICENSE: Apache 2.0 <https://github.com/apache/commons-codec/blob/1.10/LICENSE.txt>

---

commons-logging » commons-logging 1.2

COPYRIGHT: Copyright 2003-2014 The Apache Software Foundation

LICENSE: Apache 2.0 [https://github.com/apache/commons-logging/blob/LOGGING\\_1\\_2/LICENSE.txt](https://github.com/apache/commons-logging/blob/LOGGING_1_2/LICENSE.txt)

---

org.apache.httpcomponents » httpcore 4.4.11

COPYRIGHT: Copyright 2005-2019 The Apache Software Foundation

LICENSE: Apache 2.0 <https://github.com/apache/httpcomponents-core/blob/4.4.11/LICENSE.txt>

=====

#### Updated 4P Dependency:

commons-codec » commons-codec 1.11

COPYRIGHT: Copyright 2002-2014 The Apache Software Foundation

LICENSE: Apache 2.0 <https://github.com/apache/commons-codec/blob/commons-codec-1.11/LICENSE.txt>

## A.18 HttpCore 4.4.10 License

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

===== Lists of 6 FOURTH PARTY DEPENDENCIES =====

Apache Commons Logging (commons-logging:commons-logging:1.2 - <http://commons.apache.org/proper/commons-logging/>)

Apache Commons Lang (org.apache.commons:commons-lang3:3.4 - <http://commons.apache.org/proper/commons-lang/>)

Objenesis (org.objenesis:objenesis:2.1 - <http://objenesis.org>)

(The Apache Software License, Version 2.0) - SEE FULL TEXT ABOVE

=====

JUnit (junit:junit:4.11 - <http://junit.org>)

(Eclipse Public License Version 1.0)

----- ECLIPSE PUBLIC LICENSE VERSION 1.0 FULL TEXT -----

Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

### 1. DEFINITIONS

"Contribution" means:

- a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b) in the case of each subsequent Contributor:
  - i) changes to the Program, and
  - ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

### 2. GRANT OF RIGHTS

- a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.
- d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

### 3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a) it complies with the terms and conditions of this Agreement; and
- b) its license agreement:
  - i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
  - ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
  - iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
  - iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a) it must be made available under this Agreement; and
- b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

### 4. COMMERCIAL DISTRIBUTION



Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

## 5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

## 6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## 7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such



Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

=====

Hamcrest Core (org.hamcrest:hamcrest-core:1.3 - <https://github.com/hamcrest/JavaHamcrest/hamcrest-core>)

(The 3-Clause BSD License)

----- FULL TEXT -----

The 3-Clause BSD License

Note: This license has also been called the "New BSD License" or "Modified BSD License". See also the 2-clause BSD License.

Copyright <YEAR> <COPYRIGHT HOLDER>

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.

=====

Mockito (org.mockito:mockito-core:1.10.19 - <http://www.mockito.org>)

The MIT License

Copyright (c) 2007 Mockito 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.

=====

## A.19 HttpCore 4.4.11 License

Apache HttpComponents Core 4.4.11

COPYRIGHT: Copyright 2005-2018 The Apache Software Foundation

LICENSE: Apache 2.0

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

4P Test Dependencies (No Compile Dependencies):

There are four 4th party dependencies, all of them are for testing only.

1) Commons-logging version 1.2 (Apache 2.0)

-----

<!--

Licensed to the Apache Software Foundation (ASF) under one or more contributor license agreements. See the NOTICE file distributed with

this work for additional information regarding copyright ownership.  
The ASF licenses this file to You 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.

-->

## 2) junit version 5.2.0 (EPL 2.0)

```
-----  
/*  
 * Copyright 2015-2018 the original author or authors.  
 *  
 * All rights reserved. This program and the accompanying materials are  
 * made available under the terms of the Eclipse Public License v2.0 which  
 * accompanies this distribution and is available at  
 *  
 * http://www.eclipse.org/legal/epl-v20.html  
 */  
-----
```

## 3) commons-lang3 version 3.8 (Apache 2.0)

```
-----  
/*  
 * Licensed to the Apache Software Foundation (ASF) under one or more  
 * contributor license agreements. See the NOTICE file distributed with  
 * this work for additional information regarding copyright ownership.  
 * The ASF licenses this file to You 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.  
 */  
-----
```

## 4) mockito-core version 2.21.0 (MIT)

```
-----  
/*
```

\* Copyright (c) 2007 Mockito contributors  
\* This program is made available under the terms of the MIT License.  
\*/

---

## A.20 IO::String 1.08 License

A copy of the Standard Version of Perl modules in this product is available at <https://www.oracle.com/downloads/opensource.html> or by following the directions on that page.

Copyright 1998-2005 Gisle Aas.

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

For a copy of the license, see [Artistic License](#).

### GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,

b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,

c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains;

but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

-----

## A.21 JSch 0.1.55 License

<http://www.jcraft.com/jsch/LICENSE.txt>



JSch 0.0.\* was released under the GNU LGPL license. Later, we have switched over to a BSD-style license.

-----  
Copyright (c) 2002-2015 Atsuhiko Yamanaka, JCraft, 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:

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 names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

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 JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE 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.

Optional Compile dependency:

=====

<http://www.jcraft.com/jzlib/LICENSE.txt>

=====

JZlib 0.0.\* were released under the GNU LGPL license. Later, we have switched over to a BSD-style license.

-----  
Copyright (c) 2000-2011 ymnk, JCraft, 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:

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 names of the authors may not be used to endorse or promote products derived from this software without specific prior written permission.

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 JCRAFT, INC. OR ANY CONTRIBUTORS TO THIS SOFTWARE 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.

## A.22 JavaScript Extension Toolkit (JET) 4.1.0 License

Copyright (c) 2014, 2017 Oracle and/or its affiliates

You are receiving the Oracle-owned portions of this software under your commercial license with Oracle. The Oracle-owned portions of this software are separately available under the UPL.

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 Irgwrks.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.

-----  
List of third party code and license attributions:

THIRD-PARTY COMPONENT FILE (path in the installation)	LICENSE (see license text reproduced below)
--	---

-----

js/libs/knockout/knockout-3.4.0.js	MIT 3.4.0
js/libs/knockout/knockout-mapping-latest.js	MIT 2.4.1
js/libs/require/require.js	MIT 2.3.2
js/libs/require/text.js	MIT 2.0.15
js/libs/js-signals/signals.js	MIT 1.0.0
js/libs/jquery/jquery-3.1.1.js	MIT 3.1.1

js/libs/jquery/jquery-ui-1.12.0.custom.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/core.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/draggable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/mouse.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/position.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/sortable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/widget.js	MIT 1.12.0
js/libs/history/history.iegte8.js	MIT 4.1.0
js/libs/es6-promise/es6-promise.js	MIT 4.0.5
js/libs/crossroads/crossroads.js	MIT 0.12.0
js/libs/oj/v3.1.0/min/ojselectcombobox.js (Select2.js)	Apache 2.1.0
js/libs/oj/v3.1.0/min/ojtree.js (jsTree.js)	MIT 1.0
js/libs/oj/v3.1.0/ojL10n.js (requireJS i18n)	MIT 2.0.2
js/libs/hammer/hammer-2.0.8.js	MIT 2.0.8
js/libs/require-css/css.js (require-css)	MIT 0.1.8
js/libs/proj4js/dist/proj4.js	Proj4js 2.3.14
scss/oj/v3.1.0/3rdparty/normalize/normalize.scss	MIT 1.0

### === Knockout.js 3.4.0 ===

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, the Knockout.js team, and other contributors

<http://knockoutjs.com/>

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.

### === Knockout Mapping plugin v2.4.1 ===

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, Roy Jacobs

<http://knockoutjs.com/documentation/plugins-mapping.html>

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.

=== knockout-amd-helpers 0.7.3 ===

The MIT License (MIT)

Copyright (c) 2015 Ryan Niemeyer

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.

=== Normalize.css ===

Copyright (c) Nicolas Gallagher and Jonathan Neal

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.

=== Foundation Responsive Library ===

Copyright (c) 2013-2015 ZURB, inc.

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 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.

=== RequireJS i18n 2.0.2 ===

MIT License

-----

Copyright (c) 2010-2011, The Dojo Foundation

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.

=== jsTree 1.0-rc3 ===

Copyright (c) 2014 Ivan Bozhanov

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.

=== Select2.js ===

Copyright 2012 Igor Vaynberg

This software is licensed under the Apache License, Version 2.0 (the "Apache License") or the GNU General Public License version 2 (the "GPL License"). You may choose either license to govern your use of this software only upon the condition that you accept all of the terms of either the Apache License or the GPL License.

You may obtain a copy of the Apache License and the GPL License at:

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

<http://www.gnu.org/licenses/gpl-2.0.html>

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

=== ES6-Promise v1.0.0 ===

Copyright (c) 2014 Yehuda Katz, Tom Dale, Stefan Penner and 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.

=== History API JavaScript Library v4.1.0 ===

MIT License (MIT)

Copyright (c) 2010-2014 Dmitrii Pakhtinov

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.

=== jQuery UI - v1.11.4 ===

Includes: core.js, widget.js, mouse.js, position.js, draggable.js, sortable.js

Copyright jQuery Foundation and other contributors, <https://jquery.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.

=== jQuery JavaScript Library v2.1.3 ===

Copyright jQuery Foundation and other contributors, <https://jquery.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>

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.

=== ES6-Promise v1.0.0 ===

Copyright (c) 2012 Miller Medeiros

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.

=== RequireJS text 2.0.12 ===

MIT License

-----

Copyright (c) 2010-2014, The Dojo Foundation

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.

== RequireJS 2.1.16 ==

MIT License

-----

Copyright (c) 2010-2015, The Dojo Foundation

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.

```

/! Hammer.JS - v2.0.4 - 2014-09-28
* http://hammerjs.github.io/
*
* Copyright (c) 2014 Jorik Tangelder;
* Licensed under the MIT license
*/

```

## A.23 JavaScript Extension Toolkit (JET) 4.2.0 License

Copyright (c) 2014, 2017 Oracle and/or its affiliates

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 Irgwrks.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.

-----  
List of third party code and license attributions:

THIRD-PARTY COMPONENT FILE (path in the installation)	LICENSE (see license text reproduced below)
-----	-----
js/libs/knockout/knockout-3.4.0.js	MIT 3.4.0
js/libs/knockout/knockout-mapping-latest.js	MIT 2.4.1
js/libs/require/require.js	MIT 2.3.2
js/libs/require/text.js	MIT 2.0.15
js/libs/js-signals/signals.js	MIT 1.0.0
js/libs/jquery/jquery-3.1.1.js	MIT 3.1.1



js/libs/jquery/jquery-ui-1.12.0.custom.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/core.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/draggable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/mouse.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/position.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/sortable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/widget.js	MIT 1.12.0
js/libs/history/history.iegte8.js	MIT 4.1.0
js/libs/es6-promise/es6-promise.js	MIT 4.0.5
js/libs/crossroads/crossroads.js	MIT 0.12.0
js/libs/oj/v3.1.0/min/ojselectcombobox.js (Select2.js)	Apache 2.1.0
js/libs/oj/v3.1.0/min/ojtree.js (jsTree.js)	MIT 1.0
js/libs/oj/v3.1.0/ojL10n.js (requireJS i18n)	MIT 2.0.2
js/libs/hammer/hammer-2.0.8.js	MIT 2.0.8
js/libs/require-css/css.js (require-css)	MIT 0.1.8
js/libs/proj4js/dist/proj4.js	Proj4js 2.3.14
scss/oj/v3.1.0/3rdparty/normalize/normalize.scss	MIT 1.0

### === Knockout.js 3.4.0 ===

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, the Knockout.js team, and other contributors

<http://knockoutjs.com/>

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.

### === Knockout Mapping plugin v2.4.1 ===

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, Roy Jacobs

<http://knockoutjs.com/documentation/plugins-mapping.html>

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.

=== knockout-amd-helpers 0.7.3 ===

The MIT License (MIT)

Copyright (c) 2015 Ryan Niemeyer

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.

=== Normalize.css ===

Copyright (c) Nicolas Gallagher and Jonathan Neal

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.

=== Foundation Responsive Library ===

Copyright (c) 2013-2015 ZURB, inc.

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 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.

=== RequireJS i18n 2.0.2 ===

MIT License

-----

Copyright (c) 2010-2011, The Dojo Foundation

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.

=== jsTree 1.0-rc3 ===

Copyright (c) 2014 Ivan Bozhanov

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.

=== Select2.js ===

Copyright 2012 Igor Vaynberg

This software is licensed under the Apache License, Version 2.0 (the "Apache License") or the GNU General Public License version 2 (the "GPL License"). You may choose either license to govern your use of this software only upon the condition that you accept all of the terms of either the Apache License or the GPL License.

You may obtain a copy of the Apache License and the GPL License at:

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

<http://www.gnu.org/licenses/gpl-2.0.html>

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

=== ES6-Promise v1.0.0 ===

Copyright (c) 2014 Yehuda Katz, Tom Dale, Stefan Penner and 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.

=== History API JavaScript Library v4.1.0 ===

MIT License (MIT)

Copyright (c) 2010-2014 Dmitrii Pakhtinov

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.

=== jQuery UI - v1.11.4 ===

Includes: core.js, widget.js, mouse.js, position.js, draggable.js, sortable.js

Copyright jQuery Foundation and other contributors, <https://jquery.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.

=== jQuery JavaScript Library v2.1.3 ===

Copyright jQuery Foundation and other contributors, <https://jquery.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>

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.

=== ES6-Promise v1.0.0 ===

Copyright (c) 2012 Miller Medeiros

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.

=== RequireJS text 2.0.12 ===

MIT License

-----

Copyright (c) 2010-2014, The Dojo Foundation

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.

== RequireJS 2.1.16 ==

MIT License

-----

Copyright (c) 2010-2015, The Dojo Foundation

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.

```

/! Hammer.JS - v2.0.4 - 2014-09-28
* http://hammerjs.github.io/
*
* Copyright (c) 2014 Jorik Tangelder;
* Licensed under the MIT license
*/

```

===== Apache-2.0 =====

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

## A.24 JavaScript Extension Toolkit (JET) 5.1.0 License

Copyright (c) 2014, 2017 Oracle and/or its affiliates

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 Irgwrks.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.

-----  
List of third party code and license attributions:

THIRD-PARTY COMPONENT FILE (path in the installation)	LICENSE (see license text reproduced below)
-----	

js/libs/knockout/knockout-3.4.0.js

MIT 3.4.0



js/libs/knockout/knockout-mapping-latest.js	MIT 2.4.1
js/libs/require/require.js	MIT 2.3.2
js/libs/require/text.js	MIT 2.0.15
js/libs/js-signals/signals.js	MIT 1.0.0
js/libs/jquery/jquery-3.1.1.js	MIT 3.1.1
js/libs/jquery/jquery-ui-1.12.0.custom.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/core.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/draggable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/mouse.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/position.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/sortable.js	MIT 1.12.0
js/libs/jquery/jqueryui-amd-1.12.0/widget.js	MIT 1.12.0
js/libs/history/history.iegte8.js	MIT 4.1.0
js/libs/es6-promise/es6-promise.js	MIT 4.0.5
js/libs/crossroads/crossroads.js	MIT 0.12.0
js/libs/oj/v3.1.0/min/ojselectcombobox.js (Select2.js)	Apache 2.1.0
js/libs/oj/v3.1.0/min/ojtree.js (jsTree.js)	MIT 1.0
js/libs/oj/v3.1.0/ojL10n.js (requireJS i18n)	MIT 2.0.2
js/libs/hammer/hammer-2.0.8.js	MIT 2.0.8
js/libs/require-css/css.js (require-css)	MIT 0.1.8
js/libs/proj4js/dist/proj4.js	Proj4js 2.3.14
scss/oj/v3.1.0/3rdparty/normalize/normalize.scss	MIT 1.0

#### ==== Knockout.js 3.4.0 ====

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, the Knockout.js team, and other contributors

<http://knockoutjs.com/>

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.

#### ==== Knockout Mapping plugin v2.4.1 ====

The MIT License (MIT) - <http://www.opensource.org/licenses/mit-license.php>

Copyright (c) Steven Sanderson, Roy Jacobs

<http://knockoutjs.com/documentation/plugins-mapping.html>

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.

=== knockout-amd-helpers 0.7.3 ===

The MIT License (MIT)

Copyright (c) 2015 Ryan Niemeyer

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.

=== Normalize.css ===

Copyright (c) Nicolas Gallagher and Jonathan Neal

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.

=== Foundation Responsive Library ===

Copyright (c) 2013-2015 ZURB, inc.

#### 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 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.

=== RequireJS i18n 2.0.2 ===

#### MIT License

-----

Copyright (c) 2010-2011, The Dojo Foundation

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.

=== jsTree 1.0-rc3 ===

Copyright (c) 2014 Ivan Bozhanov

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.

=== Select2.js ===

Copyright 2012 Igor Vaynberg

This software is licensed under the Apache License, Version 2.0 (the "Apache License") or the GNU General Public License version 2 (the "GPL License"). You may choose either license to govern your use of this software only upon the condition that you accept all of the terms of either the Apache License or the GPL License.

You may obtain a copy of the Apache License and the GPL License at:

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

<http://www.gnu.org/licenses/gpl-2.0.html>

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

=== ES6-Promise v1.0.0 ===

Copyright (c) 2014 Yehuda Katz, Tom Dale, Stefan Penner and 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.

=== History API JavaScript Library v4.1.0 ===

MIT License (MIT)

Copyright (c) 2010-2014 Dmitrii Pakhtinov

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.

=== jQuery UI - v1.11.4 ===

Includes: core.js, widget.js, mouse.js, position.js, draggable.js, sortable.js

Copyright jQuery Foundation and other contributors, <https://jquery.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.

=== jQuery JavaScript Library v2.1.3 ===

Copyright jQuery Foundation and other contributors, <https://jquery.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>

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.

=== ES6-Promise v1.0.0 ===

Copyright (c) 2012 Miller Medeiros

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.

=== RequireJS text 2.0.12 ===

MIT License

-----

Copyright (c) 2010-2014, The Dojo Foundation

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.

== RequireJS 2.1.16 ==

MIT License

-----

Copyright (c) 2010-2015, The Dojo Foundation

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.

```

/! Hammer.JS - v2.0.4 - 2014-09-28
* http://hammerjs.github.io/
*
* Copyright (c) 2014 Jorik Tangelder;
* Licensed under the MIT license
*/

```

===== Apache-2.0 =====

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

## A.25 JavaScript Extension Toolkit (JET) 6.0.0 License

# Oracle JET 6.0.0

You may not use the identified files except in compliance with the Universal Permissive License (UPL), Version 1.0 (the "License.")

You may obtain a copy of the License at <https://opensource.org/licenses/UPL>. A copy of the license is also reproduced below.

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.

Copyright (c) 2014, 2018 Oracle and/or its affiliates

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 lrgwrks.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.

DO NOT TRANSLATE OR LOCALIZE.

\*\*\*\*\*

Oracle elects to use only the GNU Lesser General Public License version 2.1 (LGPL) for any software where a choice of LGPL/GPL license versions are made available with the language indicating that LGPLv2.1/GPLv2 or any later version may be used, or where a choice of which version of the LGPL/GPL is applied is unspecified.

\*\*\*\*\*

THIRD-PARTY COMPONENT FILE (path in the installation)	LICENSE (see license text reproduced below)
js/libs/crossroads/crossroads.js	MIT
js/libs/es6-promise/es6-promise.js	MIT
js/libs/hammer/hammer-2.0.8.js	MIT
js/libs/history/history.iegte8.js	MIT
js/libs/js-signals/signals.js	MIT
js/libs/jquery/jquery-3.3.1.js	MIT
js/libs/jquery/jquery-ui-1.12.1.custom.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/core.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/draggable.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/mouse.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/position.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/sortable.js	MIT
js/libs/jquery/jqueryui-amd-1.12.1/widget.js	MIT
js/libs/knockout/knockout-3.4.2.js	MIT
js/libs/knockout/knockout-mapping-latest.js	MIT
js/libs/oj/v6.0.0/min/ojknockout.js (knockout-fast-foreach.js)	MIT
js/libs/oj/v6.0.0/min/ojselectcombobox.js (Select2.js)	Apache 2.0
js/libs/oj/v6.0.0/min/ojtree.js (jsTree.js)	MIT
js/libs/oj/v6.0.0/ojL10n.js (requireJS i18n)	MIT
js/libs/proj4js/dist/proj4.js	Proj4js
js/libs/require/require.js	MIT
js/libs/require/text.js	MIT
js/libs/require-css/css.js (require-css)	MIT
js/libs/webcomponents/custom-elements.min.js	custom-elements
scss/oj/v6.0.0/3rdparty/normalize/normalize.scss	MIT
js/libs/touchr/touchr.js	MIT

/\*!



```

    Knockout Fast Foreach v0.6.0 (2016-07-28T11:02:54.197Z)
    By: Brian M Hunt (C) 2015 | License: MIT
*/

/**
 * webcomponents/custom-elements - v1.1.2
 *
 * Copyright (c) 2015 The Polymer 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.
*/

/*
 * proj4js - v2.5.0
 * http://proj4js.org/
 * Copyright (C) 2014 Mike Adair, Richard Greenwood, Didier Richard, Stephen
Irons, Olivier Terral and Calvin Metcalf;
 * Licensed under the Proj4js license
*/

/*
 * require-css - v0.1.10
 * https://github.com/guybedford/require-css
 * Copyright (C) 2013 Guy Bedford;
 * Licensed under the MIT license
*/

/*! Hammer.JS - v2.0.4 - 2014-09-28
 * http://hammerjs.github.io/
 *
 * Copyright (c) 2014 Jorik Tangelder;
 * Licensed under the MIT license */

/*

```



```

* Foundation Responsive Library
* http://foundation.zurb.com
* Copyright 2014, ZURB
* Free to use under the MIT license.
* http://www.opensource.org/licenses/mit-license.php
*/

Normalize.scss
Copyright (c) Nicolas Gallagher and Jonathan Neal

/*
RequireJS i18n 2.0.2 Copyright (c) 2010-2012, The Dojo Foundation All Rights
Reserved.
Available via the MIT or new BSD license.
see: http://github.com/requirejs/i18n for details
*/

/* This component is based on original code from:
jsTree 1.0-rc3 http://jstree.com/
"Copyright (c) 2010 Ivan Bozhanov (vakata.com)
Licensed same as jquery - under the terms of either the MIT License or
the GPL Version 2 License
http://www.opensource.org/licenses/mit-license.php
http://www.gnu.org/licenses/gpl.html"
*/

/**
 * @preserve Copyright 2012 Igor Vaynberg
 *
 * This software is licensed under the Apache License, Version 2.0 (the
"Apache License") or the GNU
 * General Public License version 2 (the "GPL License"). You may choose
either license to govern your
 * use of this software only upon the condition that you accept all of the
terms of either the Apache
 * License or the GPL License.
 *
 * You may obtain a copy of the Apache License and the GPL License at:
 *
 * http://www.apache.org/licenses/LICENSE-2.0
 * http://www.gnu.org/licenses/gpl-2.0.html
 *
 * Unless required by applicable law or agreed to in writing, software
distributed under the
 * Apache License or the GPL License is distributed on an "AS IS" BASIS,
WITHOUT WARRANTIES OR
 * CONDITIONS OF ANY KIND, either express or implied. See the Apache License
and the GPL License for
 * the specific language governing permissions and limitations under the
Apache License and the GPL License.
*/

/** @license
 * crossroads <http://millermedeiros.github.com/crossroads.js/>
 * Author: Miller Medeiros | MIT License
 * v0.12.0 (2013/01/21 13:47)

```

```

*/

ES6-Promise v1.0.0
Copyright (c) 2014 Yehuda Katz, Tom Dale, Stefan Penner and contributors

/*!
 * History API JavaScript Library v4.1.0
 *
 * Support: IE8+, FF3+, Opera 9+, Safari, Chrome and other
 *
 * Copyright 2011-2013, Dmitrii Pakhtinov ( spb.piksel@gmail.com )
 *
 * http://spb-piksel.ru/
 *
 * Dual licensed under the MIT and GPL licenses:
 *   http://www.opensource.org/licenses/mit-license.php
 *   http://www.gnu.org/licenses/gpl.html
 *
 * Update: 2014-03-24 13:14
 */

/*! jQuery UI - v1.11.4 - 2015-03-18
 * http://jqueryui.com
 * Includes: core.js, widget.js, mouse.js, position.js, draggable.js,
 * sortable.js
 * Copyright 2015 jQuery Foundation and other contributors; Licensed MIT */

/*!
 * jQuery JavaScript Library v2.2.3
 * http://jquery.com/
 *
 * Includes Sizzle.js
 * http://sizzlejs.com/
 *
 * Copyright 2005, 2014 jQuery Foundation, Inc. and other contributors
 * Released under the MIT license
 * http://jquery.org/license
 *
 * Date: 2014-12-18T15:11Z
 */

/** @license
 * JS Signals <http://millermedeiros.github.com/js-signals/>
 * Released under the MIT license
 * Author: Miller Medeiros
 * Version: 1.0.0 - Build: 268 (2012/11/29 05:48 PM)
 */

/**
 * @license RequireJS text 2.0.12 Copyright (c) 2010-2014, The Dojo
 * Foundation All Rights Reserved.
 * Available via the MIT or new BSD license.
 * see: http://github.com/requirejs/text for details
 */

/*

```

RequireJS 2.1.16 Copyright (c) 2010-2015, The Dojo Foundation All Rights Reserved.  
Available via the MIT or new BSD license.  
see: <http://github.com/jrburke/requirejs> for details  
\*/

/\*!  
\* Knockout JavaScript library v3.4.2  
\* (c) Steven Sanderson - <http://knockoutjs.com/>  
\* License: MIT (<http://www.opensource.org/licenses/mit-license.php>)  
\*/

===

=====

===== Apache-2.0 =====

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

===

=====

===== MIT =====

The MIT License

Copyright (c) \_\_YEARS\_\_, \_\_NAMES\_\_

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.

===

=====

===== Proj4js =====

Mike Adair madairATdmsolutions.ca

Richard Greenwood richATgreenwoodmap.com

Didier Richard didier.richardATign.fr

Stephen Irons stephen.ironsATclear.net.nz

Olivier Terral oterralATgmail.com

Calvin Metcalf cmetcalfATappgeo.com

Copyright (c) 2014, Mike Adair, Richard Greenwood, Didier Richard, Stephen Irons, Olivier Terral and Calvin Metcalf

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.

## A.26 Jetty 9.4.12 License

```
=====
Jetty Web Container
Copyright 1995-2018 Mort Bay Consulting Pty Ltd.
=====
```

The Jetty Web Container is Copyright Mort Bay Consulting Pty Ltd unless otherwise noted.

Jetty is dual licensed under both

- \* The Apache 2.0 License  
<http://www.apache.org/licenses/LICENSE-2.0.html>

and

- \* The Eclipse Public 1.0 License  
<http://www.eclipse.org/legal/epl-v10.html>

Jetty may be distributed under either license.

-----  
Eclipse

The following artifacts are EPL.

- \* org.eclipse.jetty.orbit:org.eclipse.jdt.core

The following artifacts are EPL and ASL2.

- \* org.eclipse.jetty.orbit:javax.security.auth.message

The following artifacts are EPL and CDDL 1.0.

- \* org.eclipse.jetty.orbit:javax.mail.glassfish

```

-----
ASM version 3.1

The following artifacts are licensed by the OW2 Foundation according to the
terms of http://asm.ow2.org/license.html

org.ow2.asm:asm-commons
org.ow2.asm:asm

-----

Apache version 1.2.5

The following artifacts are ASL2 licensed.

org.apache.taglibs:taglibs-standard-spec
org.apache.taglibs:taglibs-standard-impl

-----

MortBay version 8.5.24.2

The following artifacts are ASL2 licensed. Based on selected classes from
following Apache Tomcat jars, all ASL2 licensed.

org.mortbay.jasper:apache-jsp
  org.apache.tomcat:tomcat-jasper
  org.apache.tomcat:tomcat-juli
  org.apache.tomcat:tomcat-jsp-api
  org.apache.tomcat:tomcat-el-api
  org.apache.tomcat:tomcat-jasper-el
  org.apache.tomcat:tomcat-api
  org.apache.tomcat:tomcat-util-scan
  org.apache.tomcat:tomcat-util

org.mortbay.jasper:apache-el
  org.apache.tomcat:tomcat-jasper-el
  org.apache.tomcat:tomcat-el-api

-----

Mortbay version 8.5.24.2

The following artifacts are CDDL + GPLv2 with classpath exception.

https://glassfish.dev.java.net/nonav/public/CDDL+GPL.html

org.eclipse.jetty.toolchain:jetty-schemas
-----

```

## A.27 Kerberos 1.16.2 License

Copyright (C) 1985-2018 by the Massachusetts Institute 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:

- 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.

Downloading of this software may constitute an export of cryptographic software from the United States of America that is subject to the United States Export Administration Regulations (EAR), 15 CFR 730-774. Additional laws or regulations may apply. It is the responsibility of the person or entity contemplating export to comply with all applicable export laws and regulations, including obtaining any required license from the U.S. government.

The U.S. government prohibits export of encryption source code to certain countries and individuals, including, but not limited to, the countries of Cuba, Iran, North Korea, Sudan, Syria, and residents and nationals of those countries.

Documentation components of this software distribution are licensed under a Creative Commons Attribution-ShareAlike 3.0 Unported License. (<http://creativecommons.org/licenses/by-sa/3.0/>)

Individual source code files are copyright MIT, Cygnus Support, Novell, OpenVision Technologies, Oracle, Red Hat, Sun Microsystems, FundsXpress, and others.

Project Athena, Athena, Athena MUSE, Discuss, Hesiod, Kerberos, Moira, and Zephyr are trademarks of the Massachusetts Institute of Technology (MIT). No commercial use of these trademarks may be made without prior written permission of MIT.

"Commercial use" means use of a name in a product or other for-profit manner. It does NOT prevent a commercial firm from referring to the MIT trademarks in order to convey information (although in doing so, recognition of their trademark status should be given).

=====

The following copyright and permission notice applies to the OpenVision Kerberos Administration system located in "kadmin/create", "kadmin/dbutil", "kadmin/passwd", "kadmin/server", "lib/kadm5", and portions of "lib/rpc":

Copyright, OpenVision Technologies, Inc., 1993-1996, All Rights Reserved

WARNING: Retrieving the OpenVision Kerberos Administration system source code, as described below, indicates your acceptance of the following terms. If you do not agree to the following terms, do not retrieve the OpenVision Kerberos administration system.

You may freely use and distribute the Source Code and Object Code compiled from it, with or without modification, but this Source Code is provided to you "AS IS" EXCLUSIVE OF ANY WARRANTY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED. IN NO EVENT WILL OPENVISION HAVE

ANY LIABILITY FOR ANY LOST PROFITS, LOSS OF DATA OR COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, OR FOR ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, THOSE RESULTING FROM THE USE OF THE SOURCE CODE, OR THE FAILURE OF THE SOURCE CODE TO PERFORM, OR FOR ANY OTHER REASON.

OpenVision retains all copyrights in the donated Source Code. OpenVision also retains copyright to derivative works of the Source Code, whether created by OpenVision or by a third party. The OpenVision copyright notice must be preserved if derivative works are made based on the donated Source Code.

OpenVision Technologies, Inc. has donated this Kerberos Administration system to MIT for inclusion in the standard Kerberos 5 distribution. This donation underscores our commitment to continuing Kerberos technology development and our gratitude for the valuable work which has been performed by MIT and the Kerberos community.

=====

Portions contributed by Matt Crawford "crawdad@fnal.gov" were work performed at Fermi National Accelerator Laboratory, which is operated by Universities Research Association, Inc., under contract DE-AC02-76CHO3000 with the U.S. Department of Energy.

=====

Portions of src/lib/crypto have the following copyright:

Copyright (C) 1998 by the FundsXpress, INC.

All rights reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, 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 FundsXpress. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. FundsXpress makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

=====

The implementation of the AES encryption algorithm in src/lib/crypto/builtin/aes has the following copyright:

Copyright © 2001, Dr Brian Gladman "brg@gladman.uk.net", Worcester, UK.

All rights reserved.

#### LICENSE TERMS

The free distribution and use of this software in both source and binary form is allowed (with or without changes) provided that:

1. distributions of this source code include the above copyright notice, this list of conditions and the following disclaimer;
2. distributions in binary form include the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other associated materials;
3. the copyright holder's name is not used to endorse products built using this software without specific written permission.

#### DISCLAIMER

This software is provided 'as is' with no explicit or implied warranties in respect of any properties, including, but not limited to, correctness and fitness for purpose.

=====

Portions contributed by Red Hat, including the pre-authentication plug-in framework and the NSS crypto implementation, contain the following copyright:

Copyright © 2006 Red Hat, Inc.

Portions copyright © 2006 Massachusetts Institute 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:

- 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 Red Hat, 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 bundled verito source code is subject to the following license:

Copyright 2011 Red Hat, Inc.

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 MS-KKDCP client implementation has the following copyright:

Copyright 2013,2014 Red Hat, 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 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 implementations of GSSAPI mechglue in GSSAPI-SPNEGO in src/lib/gssapi, including the following files:

```
lib/gssapi/generic/gssapi_err_generic.et
lib/gssapi/mechglue/g_accept_sec_context.c
lib/gssapi/mechglue/g_acquire_cred.c
lib/gssapi/mechglue/g_canon_name.c
lib/gssapi/mechglue/g_compare_name.c
lib/gssapi/mechglue/g_context_time.c
lib/gssapi/mechglue/g_delete_sec_context.c
lib/gssapi/mechglue/g_dsp_name.c
lib/gssapi/mechglue/g_dsp_status.c
lib/gssapi/mechglue/g_dup_name.c
lib/gssapi/mechglue/g_exp_sec_context.c
lib/gssapi/mechglue/g_export_name.c
lib/gssapi/mechglue/g_glue.c
lib/gssapi/mechglue/g_imp_name.c
```

```
lib/gssapi/mechglue/g_imp_sec_context.c
lib/gssapi/mechglue/g_init_sec_context.c
lib/gssapi/mechglue/g_initialize.c
lib/gssapi/mechglue/g_inquire_context.c
lib/gssapi/mechglue/g_inquire_cred.c
lib/gssapi/mechglue/g_inquire_names.c
lib/gssapi/mechglue/g_process_context.c
lib/gssapi/mechglue/g_rel_buffer.c
lib/gssapi/mechglue/g_rel_cred.c
lib/gssapi/mechglue/g_rel_name.c
lib/gssapi/mechglue/g_rel_oid_set.c
lib/gssapi/mechglue/g_seal.c
lib/gssapi/mechglue/g_sign.c
lib/gssapi/mechglue/g_store_cred.c
lib/gssapi/mechglue/g_unseal.c
lib/gssapi/mechglue/g_userok.c
lib/gssapi/mechglue/g_utils.c
lib/gssapi/mechglue/g_verify.c
lib/gssapi/mechglue/gssd_pname_to_uid.c
lib/gssapi/mechglue/mglueP.h
lib/gssapi/mechglue/oid_ops.c
lib/gssapi/spnego/gssapiP_spnego.h
lib/gssapi/spnego/spnego_mech.c
```

and the initial implementation of incremental propagation, including the following new or changed files:

```
include/iprop_hdr.h
kadmin/server/ipropd_svc.c
lib/kdb/iprop.x
lib/kdb/kdb_convert.c
lib/kdb/kdb_log.c
lib/kdb/kdb_log.h
lib/krb5/error_tables/kdb5_err.et
slave/kpropd_rpc.c
slave/kproplog.c
```

are subject to the following license:

Copyright © 2004 Sun Microsystems, Inc.

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.

=====

Kerberos V5 includes documentation and software developed at the University of California at Berkeley, which includes this copyright notice:

Copyright © 1983 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.

=====

Portions contributed by Novell, Inc., including the LDAP database backend, are subject to the following license:

Copyright © 2004-2005, Novell, 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.
- The copyright holder's name is not 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.

=====

Portions funded by Sandia National Laboratory and developed by the University of Michigan's Center for Information Technology Integration, including the PKINIT implementation, are subject to the following license:

COPYRIGHT © 2006-2007

THE REGENTS OF THE UNIVERSITY OF MICHIGAN

ALL RIGHTS RESERVED

Permission is granted to use, copy, create derivative works and redistribute this software and such derivative works for any purpose, so long as the name of The University of Michigan is not used in any advertising or publicity pertaining to the use of distribution of this software without specific, written prior authorization. If the above copyright notice or any other identification of the University of Michigan is included in any copy of any portion of this software, then the disclaimer below must also be included.

THIS SOFTWARE IS PROVIDED AS IS, WITHOUT REPRESENTATION FROM THE UNIVERSITY OF MICHIGAN AS TO ITS FITNESS FOR ANY PURPOSE, AND WITHOUT WARRANTY BY THE UNIVERSITY OF MICHIGAN OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE REGENTS OF THE UNIVERSITY OF MICHIGAN SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WITH RESPECT TO ANY CLAIM ARISING OUT OF OR IN CONNECTION WITH THE USE OF THE SOFTWARE, EVEN IF IT HAS BEEN OR IS HEREAFTER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

=====

The pkcs11.h file included in the PKINIT code has the following license:

Copyright 2006 g10 Code GmbH

Copyright 2006 Andreas Jellinghaus

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.

=====

Portions contributed by Apple Inc. are subject to the following license:

Copyright 2004-2008 Apple Inc. All Rights Reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, 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 Apple Inc. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Apple Inc. makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

THIS SOFTWARE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

=====

The implementations of UTF-8 string handling in src/util/support and src/lib/krb5/unicode are subject to the following copyright and permission notice:

The OpenLDAP Public License

Version 2.8, 17 August 2003

Redistribution and use of this software and associated documentation ("Software"), with or without modification, are permitted provided that the following conditions are met:

1. Redistributions in source form must retain copyright statements and notices,
2. Redistributions in binary form must reproduce applicable copyright statements and notices, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution, and
3. Redistributions must contain a verbatim copy of this document.

The OpenLDAP Foundation may revise this license from time to time. Each revision is distinguished by a version number. You may use this Software under terms of this license revision or under the terms of any subsequent revision of the license.

THIS SOFTWARE IS PROVIDED BY THE OPENLDAP FOUNDATION AND ITS CONTRIBUTORS "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 OPENLDAP FOUNDATION, ITS CONTRIBUTORS, OR THE AUTHOR(S) OR OWNER(S) OF THE SOFTWARE 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 names of the authors and copyright holders must not be used in advertising or otherwise to promote the sale, use or other dealing in this Software without specific, written prior permission. Title to copyright in this Software shall at all times remain with copyright holders.

OpenLDAP is a registered trademark of the OpenLDAP Foundation.

Copyright 1999-2003 The OpenLDAP Foundation, Redwood City, California, USA. All Rights Reserved. Permission to copy and distribute verbatim copies of this document is granted.

=====

Marked test programs in src/lib/krb5/krb have the following copyright:

Copyright © 2006 Kungliga Tekniska Högskola

(Royal Institute of Technology, Stockholm, Sweden).

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 KTH 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 KTH AND ITS 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 KTH 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.

=====

The KCM Mach RPC definition file used on macOS has the following copyright:

Copyright © 2009 Kungliga Tekniska Högskola

(Royal Institute of Technology, Stockholm, Sweden).

All rights reserved.

Portions Copyright © 2009 Apple 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:

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 Institute 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 INSTITUTE 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 INSTITUTE 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.

=====

Portions of the RPC implementation in src/lib/rpc and src/include/gssrpc have the following copyright and permission notice:

Copyright © 2010, Oracle America, 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:

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 "Oracle America, 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 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.

=====

Copyright © 2006,2007,2009 NTT (Nippon Telegraph and Telephone 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 as the first lines of this file unmodified.
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 NTT "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 NTT 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 2000 by Carnegie Mellon University

All Rights Reserved

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 Carnegie Mellon University not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.

CARNEGIE MELLON UNIVERSITY DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL CARNEGIE MELLON UNIVERSITY 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.

=====

Copyright © 2002 Naval Research Laboratory (NRL/CCS)

Permission to use, copy, modify and distribute this software and its documentation is hereby granted, provided that both the copyright notice and this permission notice appear in all copies of the software, derivative works or modified versions, and any portions thereof.

NRL ALLOWS FREE USE OF THIS SOFTWARE IN ITS "AS IS" CONDITION AND DISCLAIMS ANY LIABILITY OF ANY KIND FOR ANY DAMAGES WHATSOEVER RESULTING FROM THE USE OF THIS SOFTWARE.

=====

Portions extracted from Internet RFCs have the following copyright notice:

Copyright © The Internet Society (2006).

This document is subject to the rights, licenses and restrictions contained in BCP 78, and except as set forth therein, the authors retain all their rights.

This document and the information contained herein are provided on an "AS IS" basis and THE CONTRIBUTOR, THE ORGANIZATION HE/SHE REPRESENTS OR IS SPONSORED BY (IF ANY), THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIM 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.

=====

Copyright © 1991, 1992, 1994 by Cygnus Support.

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. Cygnus Support makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

=====

Copyright © 2006 Secure Endpoints Inc.

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.

=====

Portions of the implementation of the Fortuna-like PRNG are subject to the following notice:

Copyright © 2005 Marko Kreen

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.

Copyright © 1994 by the University of Southern California

EXPORT OF THIS SOFTWARE from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, permission to copy, modify, and distribute this software and its documentation in source and binary forms is hereby granted, provided that any documentation or other materials related to such distribution or use acknowledge that the software was developed by the University of Southern California.

DISCLAIMER OF WARRANTY. THIS SOFTWARE IS PROVIDED "AS IS". The University of Southern California MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. By way of example, but not limitation, the University of Southern California MAKES NO REPRESENTATIONS OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. The University of Southern California shall not be held liable for any liability nor for any direct, indirect, or consequential damages with respect to any claim by the user or distributor of the ksu software.

=====

Copyright © 1995

The President and Fellows of Harvard University

This code is derived from software contributed to Harvard by Jeremy Rassen.

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 acknowledgement:  
  
This product includes software developed by the University of California, Berkeley and its contributors.
4. 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 © 2008 by the Massachusetts Institute of Technology.

Copyright 1995 by Richard P. Basch. All Rights Reserved.

Copyright 1995 by Lehman Brothers, Inc. All Rights Reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, 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 Richard P. Basch, Lehman Brothers and M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Richard P. Basch, Lehman Brothers and M.I.T. make no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

=====

The following notice applies to src/lib/krb5/krb/strptime.c and src/include/k5-queue.h.

Copyright © 1997, 1998 The NetBSD Foundation, Inc.

All rights reserved.

This code was contributed to The NetBSD Foundation by Klaus Klein.

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 acknowledgement:

This product includes software developed by the NetBSD Foundation, Inc. and its contributors.

4. Neither the name of The NetBSD Foundation 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 NETBSD FOUNDATION, INC. 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 FOUNDATION 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 following notice applies to Unicode library files in src/lib/krb5/unicode:

Copyright 1997, 1998, 1999 Computing Research Labs,

New Mexico State University

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.

=====

The following notice applies to src/util/support/strncpy.c:

Copyright © 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.

=====

The following notice applies to src/util/profile/argv\_parse.c and src/util/profile/argv\_parse.h:

Copyright 1999 by Theodore Ts'o.

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 THEODORE TS'O (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. (Isn't it sick that the U.S. culture of lawsuit-happy lawyers requires this kind of disclaimer?)

=====

The following notice applies to SWIG-generated code in src/util/profile/profile\_tcl.c:

Copyright © 1999-2000, The University of Chicago

This file may be freely redistributed without license or fee provided this copyright message remains intact.

=====

The following notice applies to portions of src/lib/rpc and src/include/gssrpc:

Copyright © 2000 The Regents of the University of Michigan. All rights reserved.

Copyright © 2000 Dug Song "dugsong@UMICH.EDU". All rights reserved, all wrongs reversed.

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 "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.

=====

Implementations of the MD4 algorithm are subject to the following notice:

Copyright © 1990, RSA Data Security, Inc. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD4 Message Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD4 Message Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

=====

Implementations of the MD5 algorithm are subject to the following notice:

Copyright © 1990, RSA Data Security, Inc. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message- Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

=====

The following notice applies to src/lib/crypto/crypto\_tests/t\_md driver.c:

Copyright © 1990-2, RSA Data Security, Inc. Created 1990. All rights reserved.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

=====

Portions of src/lib/krb5 are subject to the following notice:

Copyright © 1994 CyberSAFE Corporation.

Copyright 1990,1991,2007,2008 by the Massachusetts Institute of Technology.

All Rights Reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, 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. Furthermore if you modify this software you must label your software as modified software and not distribute it in such a fashion that it might be confused with the original M.I.T. software. Neither M.I.T., the Open Computing Security Group, nor CyberSAFE Corporation make any representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

=====

Portions contributed by PADL Software are subject to the following license:

Copyright (c) 2011, PADL Software Pty Ltd. 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 PADL Software 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 PADL SOFTWARE 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 PADL SOFTWARE 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 bundled libev source code is subject to the following license:

All files in libev are Copyright (C)2007,2008,2009 Marc Alexander Lehmann.

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.

Alternatively, the contents of this package may be used under the terms of the GNU General Public License ("GPL") version 2 or any later version, in which case the provisions of the GPL are applicable instead of the above. If you wish to allow the use of your version of this package only under the terms of the GPL and not to allow others to use your version of this file under the BSD license, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the GPL in this and the other files of this package. If you do not delete the provisions above, a recipient may use your version of this file under either the BSD or the GPL.

=====



Files copied from the Intel AESNI Sample Library are subject to the following license:

Copyright © 2010, 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 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 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 following notice applies to "src/ccapi/common/win/OldCC/autolock.hxx":

Copyright (C) 1998 by Danilo Almeida. 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.



## A.28 Log4J 2.11.1 License

log4j 2.11.1

COPYRIGHT: Copyright 1999-2017 Apache Software Foundation

LICENSE: Apache 2.0

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

Modules:

log4j-1.2-api  
log4j-api-java9  
log4j-api  
log4j-appserver  
log4j-bom  
log4j-cassandra  
log4j-core-its  
log4j-core-java9  
log4j-core  
log4j-couchdb  
log4j-distribution  
log4j-flume-ng  
log4j-iostreams  
log4j-jcl  
log4j-jdbc-dbc2  
log4j-jmx-gui  
log4j-jpa  
log4j-jul  
log4j-liquibase  
log4j-mongodb2  
log4j-mongodb3  
log4j-osgi  
log4j-perf  
log4j-samples  
log4j-slf4j-impl  
log4j-slf4j18-impl  
log4j-taglib  
log4j-to-slf4j  
log4j-web

=====

4P Dependencies

-----

FROM NOTICE FILE:

This product includes software developed at  
The Apache Software Foundation (<http://www.apache.org/>).

ResolverUtil.java  
Copyright 2005-2006 Tim Fennell  
LICENSE: Apache 2.0 <http://www.apache.org/licenses/LICENSE-2.0>

Dumbster SMTP test server  
Copyright 2004 Jason Paul Kitchen  
LICENSE: Apache 2.0 <http://www.apache.org/licenses/LICENSE-2.0>

TypeUtil.java  
Copyright 2002-2012 Ramnivas Laddad, Juergen Hoeller, Chris Beams  
LICENSE: Apache 2.0 <http://www.apache.org/licenses/LICENSE-2.0>

picocli (<http://picocli.info>)  
Copyright 2017 Remko Popma  
LICENSE: Apache 2.0 <http://www.apache.org/licenses/LICENSE-2.0>

-----

#### FROM POM FILES (Compile Dependencies Only)

---

com.lmax disruptor 3.4.2  
Copyright 2011 - 2018 LMAX Ltd.  
LICENSE: Apache 2.0 <https://github.com/LMAX-Exchange/disruptor/blob/3.4.2/LICENSE.txt>

---

org.springframework spring-aop 3.2.18.RELEASE  
COPYRIGHT: Copyright 2002-2018 the original author or authors.  
LICENSE: Apache 2.0 <http://www.apache.org/licenses/LICENSE-2.0>

---

slf4j-api 1.7.25  
slf4j-ext 1.7.25  
COPYRIGHT and LICENSE:  
Copyright (c) 2004-2017 QOS.ch  
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.

## A.29 Lucene 7.5.0 License

LICENSE.txt

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

NOTICE.txt

-----  
Apache Lucene

Copyright 2001-2018 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

Includes software from other Apache Software Foundation projects, including, but not limited to:

- Apache Ant
- Apache Jakarta Regexp
- Apache Commons
- Apache Xerces

ICU4J, (under analysis/icu) is licensed under an MIT styles license and Copyright (c) 1995-2008 International Business Machines Corporation and others

Some data files (under analysis/icu/src/data) are derived from Unicode data such as the Unicode Character Database. See <http://unicode.org/copyright.html> for more details.

Brics Automaton (under core/src/java/org/apache/lucene/util/automaton) is BSD-licensed, created by Anders Møller. See <http://www.brics.dk/automaton/>

The levenshtein automata tables (under core/src/java/org/apache/lucene/util/automaton) were automatically generated with the moman/finenight FSA library, created by Jean-Philippe Barrette-LaPierre. This library is available under an MIT license, see <http://sites.google.com/site/rrettesite/moman> and <http://bitbucket.org/jpbarrette/moman/overview/>

The class org.apache.lucene.util.WeakIdentityMap was derived from the Apache CXF project and is Apache License 2.0.

The Google Code Prettify is Apache License 2.0. See <http://code.google.com/p/google-code-prettify/>

JUnit, used in development of this product, (junit-4.10) is licensed under the Common Public License v. 1.0 See <http://junit.sourceforge.net/cpl-v10.html>, but is not distributed with this package.

This product includes code (JaspellTernarySearchTrie) from Java Spelling Checking Package (jaspell): <http://jaspell.sourceforge.net/>

License: The BSD License (<http://www.opensource.org/licenses/bsd-license.php>)

The snowball stemmers in analysis/common/src/java/net/sf/snowball were developed by Martin Porter and Richard Boulton.

The snowball stopword lists in `analysis/common/src/resources/org/apache/lucene/analysis/snowball` were developed by Martin Porter and Richard Boulton.

The full snowball package is available from <http://snowball.tartarus.org/>

The KStem stemmer in `analysis/common/src/org/apache/lucene/analysis/en` was developed by Bob Krovetz and Sergio Guzman-Lara (CIIR-UMass Amherst) under the BSD-license.

The Arabic, Persian, Romanian, Bulgarian, Hindi and Bengali analyzers (common) come with a default stopword list that is BSD-licensed created by Jacques Savoy. These files reside in:

```
analysis/common/src/resources/org/apache/lucene/analysis/ar/stopwords.txt,  
analysis/common/src/resources/org/apache/lucene/analysis/fa/stopwords.txt,  
analysis/common/src/resources/org/apache/lucene/analysis/ro/stopwords.txt,  
analysis/common/src/resources/org/apache/lucene/analysis/bg/stopwords.txt,  
analysis/common/src/resources/org/apache/lucene/analysis/hi/stopwords.txt,  
analysis/common/src/resources/org/apache/lucene/analysis/bn/stopwords.txt
```

See <http://members.unine.ch/jacques.savoy/clef/index.html>.

The German, Spanish, Finnish, French, Hungarian, Italian, Portuguese, Russian and Swedish light stemmers (common) are based on BSD-licensed reference implementations created by Jacques Savoy and Ljiljana Dolamic. These files reside in:

```
analysis/common/src/java/org/apache/lucene/analysis/de/GermanLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/de/GermanMinimalStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/es/SpanishLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/fi/FinnishLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/fr/FrenchLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/fr/FrenchMinimalStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/hu/HungarianLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/it/ItalianLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/pt/PortugueseLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/ru/RussianLightStemmer.java  
analysis/common/src/java/org/apache/lucene/analysis/sv/SwedishLightStemmer.java
```

The Stempel analyzer (stempel) includes BSD-licensed software developed by the Egothor project <http://egothor.sf.net/>, created by Leo Galambos, Martin Kvapil, and Edmond Nolan.

The Polish analyzer (stempel) comes with a default stopword list that is BSD-licensed created by the Carrot2 project. The file resides in `stempel/src/resources/org/apache/lucene/analysis/pl/stopwords.txt`. See <http://project.carrot2.org/license.html>.

The SmartChineseAnalyzer source code (smartcn) was provided by Xiaoping Gao and copyright 2009 by [www.imdict.net](http://www.imdict.net).

`WordBreakTestUnicode_*.java` (under `modules/analysis/common/src/test/`) is derived from Unicode data such as the Unicode Character Database. See <http://unicode.org/copyright.html> for more details.

The Morfologik analyzer (morfologik) includes BSD-licensed software developed by Dawid Weiss and Marcin Miłkowski (<http://morfologik.blogspot.com/>).

Morfologik uses data from Polish `ispell/myspell` dictionary (<http://www.sjp.pl/slownik/en/>) licenced on the terms of (inter alia) LGPL and Creative Commons ShareAlike.

Morfologic includes data from BSD-licensed dictionary of Polish (SGJP) (<http://sgjp.pl/morfeusz/>)

Servlet-api.jar and javax.servlet-\*.jar are under the CDDL license, the original source code for this can be found at <http://www.eclipse.org/jetty/downloads.php>, but is not distributed with this package.

=====

### Kuromoji Japanese Morphological Analyzer - Apache Lucene Integration

=====

This software includes a binary and/or source version of data from

mecab-ipadic-2.7.0-20070801

which can be obtained from

<http://atilika.com/releases/mecab-ipadic/mecab-ipadic-2.7.0-20070801.tar.gz>

or

<http://jaist.dl.sourceforge.net/project/mecab/mecab-ipadic/2.7.0-20070801/mecab-ipadic-2.7.0-20070801.tar.gz>

=====

### mecab-ipadic-2.7.0-20070801 Notice

=====

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 tortious 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.

=====

Nori Korean Morphological Analyzer - Apache Lucene Integration

=====

This software includes a binary and/or source version of data from

mecab-ko-dic-2.0.3-20170922

which can be obtained from

<https://bitbucket.org/eunjeon/mecab-ko-dic/downloads/mecab-ko-dic-2.0.3-20170922.tar.gz>

antlr4-runtime-LICENSE-BSD.tx

-----

[The "BSD license"]

Copyright (c) 2015 Terence Parr, Sam Harwell

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 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.

antlr4-runtime-NOTICE.txt

-----  
morfologik-fsa-LICENSE-BSD.txt

-----  
Copyright (c) 2006 Dawid Weiss

Copyright (c) 2007-2016 Dawid Weiss, Marcin Miłkowski

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 Morfologik 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.

morfologik-fsa-NOTICE.txt

-----  
This product includes BSD-licensed software developed by Dawid Weiss and Marcin Miłkowski (<http://morfologik.blogspot.com/>).

morfologik-polish-LICENSE-BSD.txt

-----  
BSD-licensed dictionary of Polish (Morfologik)

VERSION: 2.1 PoliMorf

BUILD: 2016-02-13 19:37:50+01:00

GIT: 6e63b53

Copyright (c) 2016, Marcin Miłkowski

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 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.

morfologik-polish-NOTICE.txt

-----

This product includes data from BSD-licensed dictionary of Polish (Morfologik, PoliMorf) (<http://morfologik.blogspot.com/>)

morfologik-stemming-LICENSE-BSD.txt

-----

Copyright (c) 2006 Dawid Weiss

Copyright (c) 2007-2016 Dawid Weiss, Marcin Miłkowski

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 Morfologik 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.

morfologik-stemming-NOTICE.txt



-----  
This product includes BSD-licensed software developed by Dawid Weiss and Marcin Milkowski (<http://morfologik.blogspot.com/>).

morfologik-ukrainian-search-LICENSE-ASL.txt

-----  
This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

morfologik-ukrainian-search-NOTICE.txt

-----  
morfologik-ukrainian-search is a POS tag dictionary in morfologik format adjusted for searching.

It's part of dict\_uk project ([https://github.com/brown-uk/dict\\_uk](https://github.com/brown-uk/dict_uk))

Note: to better fit into full-text search model this dictionary has all word forms in lower case but keeps lemmas for proper nouns in upper case.

Licensed under Apache License 2.0.

opennlp-tools-LICENSE-ASL.txt

-----  
This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

opennlp-tools-NOTICE.txt

-----  
Apache OpenNLP Tools

Copyright 2015 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

antlr4-runtime-LICENSE-BSD.txt

-----  
[The "BSD license"]

Copyright (c) 2015 Terence Parr, Sam Harwell

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 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.

antlr4-runtime-NOTICE.txt

-----

asm-commons-LICENSE-BSD\_LIKE.txt

-----

Copyright (c) 2012 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.

asm-commons-NOTICE.txt

-----

hppc-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

hppc-NOTICE.txt

-----

httpcore-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

This project contains annotations derived from JCIP-ANNOTATIONS

Copyright (c) 2005 Brian Goetz and Tim Peierls.

See <http://www.jcip.net> and the Creative Commons Attribution License

(<http://creativecommons.org/licenses/by/2.5>)

httpcore-NOTICE.txt

-----

Apache HttpComponents Client

Copyright 1999-2011 The Apache Software Foundation

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

This project contains annotations derived from JCIP-ANNOTATIONS

Copyright (c) 2005 Brian Goetz and Tim Peierls. See <http://www.jcip.net>

jetty-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

jetty-NOTICE.txt

-----

Eclipse.org Software User Agreement

Eclipse Foundation Software User Agreement

March 17, 2005

Usage Of Content

THE ECLIPSE FOUNDATION MAKES AVAILABLE SOFTWARE, DOCUMENTATION, INFORMATION AND/OR OTHER MATERIALS FOR OPEN SOURCE PROJECTS (COLLECTIVELY "CONTENT"). USE OF THE CONTENT IS GOVERNED BY THE TERMS AND CONDITIONS OF THIS AGREEMENT AND/OR THE TERMS AND CONDITIONS OF LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW. BY USING THE CONTENT, YOU AGREE THAT YOUR USE OF THE CONTENT IS GOVERNED BY THIS AGREEMENT AND/OR THE TERMS AND CONDITIONS OF ANY APPLICABLE LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW. IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT AND THE TERMS AND CONDITIONS OF ANY APPLICABLE LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW, THEN YOU MAY NOT USE THE CONTENT.

## Applicable Licenses

Unless otherwise indicated, all Content made available by the Eclipse Foundation is provided to you under the terms and conditions of the Eclipse Public License Version 1.0 ("EPL"). A copy of the EPL is provided with this Content and is also available at <http://www.eclipse.org/legal/epl-v10.html>

For purposes of the EPL, "Program" will mean the Content.

Content includes, but is not limited to, source code, object code, documentation and other files maintained in the Eclipse.org CVS repository ("Repository") in CVS modules ("Modules") and made available as downloadable archives ("Downloads").

- Content may be structured and packaged into modules to facilitate delivering, extending, and upgrading the Content. Typical modules may include plug-ins ("Plug-ins"), plug-in fragments ("Fragments"), and features ("Features").
- Each Plug-in or Fragment may be packaged as a sub-directory or JAR (Java ARchive) in a directory named "plugins".
- A Feature is a bundle of one or more Plug-ins and/or Fragments and associated material. Each Feature may be packaged as a sub-directory in a directory named "features". Within a Feature, files named "feature.xml" may contain a list of the names and version numbers of the Plug-ins and/or Fragments associated with that Feature.
- Features may also include other Features ("Included Features"). Within a Feature, files named "feature.xml" may contain a list of the names and version numbers of Included Features.

The terms and conditions governing Plug-ins and Fragments should be contained in files named "about.html" ("Abouts"). The terms and conditions governing Features and Included Features should be contained in files named "license.html" ("Feature Licenses"). Abouts and Feature Licenses may be located in any directory of a Download or Module including, but not limited to the following locations:

- The top-level (root) directory
- Plug-in and Fragment directories
- Inside Plug-ins and Fragments packaged as JARs
- Sub-directories of the directory named "src" of certain Plug-ins
- Feature directories

Note: if a Feature made available by the Eclipse Foundation is installed using the Eclipse Update Manager, you must agree to a license ("Feature Update License") during the installation process. If the Feature contains Included Features, the Feature Update License should either provide you with the terms and conditions governing the Included Features or inform you where you can locate them. Feature Update Licenses may be found in the "license" property of files named "feature.properties" found within a Feature. Such Abouts, Feature Licenses, and Feature Update Licenses contain the terms and conditions (or references to such terms and conditions) that govern your use of the associated Content in that directory.

THE ABOUTS, FEATURE LICENSES, AND FEATURE UPDATE LICENSES MAY REFER TO THE EPL OR OTHER LICENSE AGREEMENTS, NOTICES OR TERMS AND CONDITIONS. SOME OF THESE OTHER LICENSE AGREEMENTS MAY INCLUDE (BUT ARE NOT LIMITED TO):

- Common Public License Version 1.0 (available at <http://www.eclipse.org/legal/cpl-v10.html>)
- Apache Software License 1.1 (available at <http://www.apache.org/licenses/LICENSE>)
- Apache Software License 2.0 (available at <http://www.apache.org/licenses/LICENSE-2.0>)

- IBM Public License 1.0 (available at <http://oss.software.ibm.com/developerworks/opensource/license10.html>)
- Metro Link Public License 1.00 (available at <http://www.opengroup.org/openmotif/supporters/metrolink/license.html>)
- Mozilla Public License Version 1.1 (available at <http://www.mozilla.org/MPL/MPL-1.1.html>)

IT IS YOUR OBLIGATION TO READ AND ACCEPT ALL SUCH TERMS AND CONDITIONS PRIOR TO USE OF THE CONTENT. If no About, Feature License, or Feature Update License is provided, please contact the Eclipse Foundation to determine what terms and conditions govern that particular Content.

### Cryptography

Content may contain encryption software. The country in which you are currently may have restrictions on the import, possession, and use, and/or re-export to another country, of encryption software. BEFORE using any encryption software, please check the country's laws, regulations and policies concerning the import, possession, or use, and re-export of encryption software, to see if this is permitted.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

jts-core-LICENSE-BSD\_LIKE.txt

-----

Eclipse Distribution License - v 1.0

Copyright (c) 2007, Eclipse Foundation, Inc. and its licensors.

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 Eclipse Foundation, 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.

jts-core-NOTICE.txt

-----

## # JTS Topology Suite Licensing

May 30th, 2017

### ## Project Licenses

The Eclipse Foundation makes available all content in this project ("Content"). Unless otherwise indicated below, the Content is provided to you under the terms and conditions of either the [Eclipse Public License 1.0](<https://www.eclipse.org/legal/epl-v10.html>) ("EPL") or the [Eclipse Distribution License 1.0](<http://www.eclipse.org/org/documents/edl-v10.php>) (a BSD Style License). For purposes of the EPL, "Program" will mean the Content.

If you did not receive this Content directly from the Eclipse Foundation, the Content is being redistributed by another party ("Redistributor") and different terms and conditions may apply to your use of any object code in the Content. Check the Redistributor's license that was provided with the Content. If no such license exists, contact the Redistributor. Unless otherwise indicated below, the terms and conditions of the EPL still apply to any source code in the Content and such source code may be obtained at <http://www.eclipse.org>.

### ## Third Party Content

The Content includes items that have been sourced from third parties as set out below. If you did not receive this Content directly from the Eclipse Foundation, the following is provided for informational purposes only, and you should look to the Redistributor's license for terms and conditions of use.

#### ### Jdom-contrib version 1.1.3

The JTS tests module contains source from JDOM Contrib 1.1.3 which is available under the Jdom License [1]. The two files are LineNumberElement.java and LineNumberSAXHandler.java.

Typical users of this library will not need to depend on this module.

[1] <https://github.com/hunterhacker/jdom/blob/master/LICENSE.txt>

#### ### GeoTools

JTS includes some code from the GeoTools project. This code has been licensed to the JTS project under the OSGeo BSD License [2] by the GeoTools PSC [3,4].

[2] <https://www.osgeo.org/sites/osgeo.org/files/Page/osgeo-bsd-license.txt>

[3] <https://github.com/geotools/geotools/wiki/JTS-ORA-Contribution>

[4] <https://github.com/geotools/geotools/wiki/JTS-Shapefile-Contribution>

slf4j-LICENSE-MIT.txt

-----

Copyright (c) 2004-2008 QOS.ch

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.

slf4j-NOTICE.txt

-----

```
=====
==  SLF4J Notice -- http://www.slf4j.org/license.html  ==
=====
```

Copyright (c) 2004-2008 QOS.ch

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.

spatial4j-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

spatial4j-NOTICE.txt

-----

# about.md file

## About This Content

May 22, 2015

### License

The Eclipse Foundation makes available all content in this plug-in ("Content"). Unless otherwise indicated below, the Content is provided to you under the terms and conditions of the Apache License, Version 2.0. A copy of the Apache License, Version 2.0 is available at [http://www.apache.org/licenses/LICENSE-2.0.txt](http://www.apache.org/licenses/LICENSE-2.0.txt)

If you did not receive this Content directly from the Eclipse Foundation, the Content is being redistributed by another party ("Redistributor") and different terms and conditions may apply to your use of any object code in the Content. Check the Redistributor's license that was provided with the Content. If no such license exists, contact the Redistributor. Unless otherwise indicated below, the terms and conditions of the Apache License, Version 2.0 still apply to any source code in the Content and such source code may be obtained at [<http://www.eclipse.org>] (<http://www.eclipse.org>).

# notice.md file

Note: the below Eclipse user agreement is standard. It says "Unless otherwise indicated, "... before referring to the EPL. We indicate above that all content is licensed under the ASLv2 license. -- David Smiley

## Eclipse Foundation Software User Agreement

April 9, 2014

### Usage Of Content

THE ECLIPSE FOUNDATION MAKES AVAILABLE SOFTWARE, DOCUMENTATION, INFORMATION AND/OR OTHER MATERIALS FOR OPEN SOURCE PROJECTS (COLLECTIVELY "CONTENT"). USE OF THE CONTENT IS GOVERNED BY THE TERMS AND CONDITIONS OF THIS AGREEMENT AND/OR THE TERMS AND CONDITIONS OF LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW. BY USING THE CONTENT, YOU AGREE THAT YOUR USE OF THE CONTENT IS GOVERNED BY THIS AGREEMENT AND/OR THE TERMS AND CONDITIONS OF ANY APPLICABLE LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW. IF YOU DO NOT AGREE TO THE TERMS AND CONDITIONS OF THIS AGREEMENT AND THE TERMS AND CONDITIONS OF ANY APPLICABLE LICENSE AGREEMENTS OR NOTICES INDICATED OR REFERENCED BELOW, THEN YOU MAY NOT USE THE CONTENT.

### Applicable Licenses

Unless otherwise indicated, all Content made available by the Eclipse Foundation is provided to you under the terms and conditions of the Eclipse Public License Version 1.0 ("EPL"). A copy of the EPL is provided with this Content and is also available at [<http://www.eclipse.org/legal/epl-v10.html>](<http://www.eclipse.org/legal/epl-v10.html>). For purposes of the EPL, "Program" will mean the Content.

Content includes, but is not limited to, source code, object code, documentation and other files maintained in the Eclipse Foundation source code repository ("Repository") in software modules ("Modules") and made available as downloadable archives ("Downloads").

- Content may be structured and packaged into modules to facilitate delivering, extending, and upgrading the Content. Typical modules may include plug-ins ("Plug-ins"), plug-in fragments ("Fragments"), and features ("Features").
- Each Plug-in or Fragment may be packaged as a sub-directory or JAR (Java™ ARchive) in a directory named "plugins".
- A Feature is a bundle of one or more Plug-ins and/or Fragments and associated material. Each Feature may be packaged as a sub-directory in a directory named "features". Within a Feature, files named "feature.xml" may contain a list of the names and version numbers of the Plug-ins and/or Fragments associated with that Feature.
- Features may also include other Features ("Included Features"). Within a Feature, files named "feature.xml" may contain a list of the names and version numbers of Included Features.



The terms and conditions governing Plug-ins and Fragments should be contained in files named "about.html" ("Abouts"). The terms and conditions governing Features and Included Features should be contained in files named "license.html" ("Feature Licenses"). Abouts and Feature Licenses may be located in any directory of a Download or Module including, but not limited to the following locations:

- The top-level (root) directory
- Plug-in and Fragment directories
- Inside Plug-ins and Fragments packaged as JARs
- Sub-directories of the directory named "src" of certain Plug-ins
- Feature directories

Note: if a Feature made available by the Eclipse Foundation is installed using the Provisioning Technology (as defined below), you must agree to a license ("Feature Update License") during the installation process. If the Feature contains Included Features, the Feature Update License should either provide you with the terms and conditions governing the Included Features or inform you where you can locate them. Feature Update Licenses may be found in the "license" property of files named "feature.properties" found within a Feature. Such Abouts, Feature Licenses, and Feature Update Licenses contain the terms and conditions (or references to such terms and conditions) that govern your use of the associated Content in that directory.

THE ABOUTS, FEATURE LICENSES, AND FEATURE UPDATE LICENSES MAY REFER TO THE EPL OR OTHER LICENSE AGREEMENTS, NOTICES OR TERMS AND CONDITIONS. SOME OF THESE OTHER LICENSE AGREEMENTS MAY INCLUDE (BUT ARE NOT LIMITED TO):

- Eclipse Distribution License Version 1.0 (available at [<http://www.eclipse.org/licenses/edl-v1.0.html>])(<http://www.eclipse.org/licenses/edl-v10.html>))
- Common Public License Version 1.0 (available at [<http://www.eclipse.org/legal/cpl-v10.html>])(<http://www.eclipse.org/legal/cpl-v10.html>))
- Apache Software License 1.1 (available at [<http://www.apache.org/licenses/LICENSE>])(<http://www.apache.org/licenses/LICENSE>))
- Apache Software License 2.0 (available at [<http://www.apache.org/licenses/LICENSE-2.0>])(<http://www.apache.org/licenses/LICENSE-2.0>))
- Mozilla Public License Version 1.1 (available at [<http://www.mozilla.org/MPL/MPL-1.1.html>])(<http://www.mozilla.org/MPL/MPL-1.1.html>))

IT IS YOUR OBLIGATION TO READ AND ACCEPT ALL SUCH TERMS AND CONDITIONS PRIOR TO USE OF THE CONTENT. If no About, Feature License, or Feature Update License is provided, please contact the Eclipse Foundation to determine what terms and conditions govern that particular Content.

### ### Use of Provisioning Technology

The Eclipse Foundation makes available provisioning software, examples of which include, but are not limited to, p2 and the Eclipse Update Manager ("Provisioning Technology") for the purpose of allowing users to install software, documentation, information and/or other materials (collectively "Installable Software"). This capability is provided with the intent of allowing such users to install, extend and update Eclipse-based products. Information about packaging Installable Software is available at [[http://eclipse.org/equinox/p2/repository\\_packaging.html](http://eclipse.org/equinox/p2/repository_packaging.html)]([http://eclipse.org/equinox/p2/repository\\_packaging.html](http://eclipse.org/equinox/p2/repository_packaging.html)) ("Specification").

You may use Provisioning Technology to allow other parties to install Installable Software. You shall be responsible for enabling the applicable license agreements relating to the Installable Software to be presented to, and accepted by, the users of the Provisioning Technology in

accordance with the Specification. By using Provisioning Technology in such a manner and making it available in accordance with the Specification, you further acknowledge your agreement to, and the acquisition of all necessary rights to permit the following:

1. A series of actions may occur ("Provisioning Process") in which a user may execute the Provisioning Technology on a machine ("Target Machine") with the intent of installing, extending or updating the functionality of an Eclipse-based product.
2. During the Provisioning Process, the Provisioning Technology may cause third party Installable Software or a portion thereof to be accessed and copied to the Target Machine.
3. Pursuant to the Specification, you will provide to the user the terms and conditions that govern the use of the Installable Software ("Installable Software Agreement") and such Installable Software Agreement shall be accessed from the Target Machine in accordance with the Specification. Such Installable Software Agreement must inform the user of the terms and conditions that govern the Installable Software and must solicit acceptance by the end user in the manner prescribed in such Installable Software Agreement. Upon such indication of agreement by the user, the provisioning Technology will complete installation of the Installable Software.

### ### Cryptography

Content may contain encryption software. The country in which you are currently may have restrictions on the import, possession, and use, and/or re-export to another country, of encryption software. BEFORE using any encryption software, please check the country's laws, regulations and policies concerning the import, possession, or use, and re-export of encryption software, to see if this is permitted.

Java and all Java-based trademarks are trademarks of Oracle Corporation in the United States, other countries, or both.

s2-geometry-library-java-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

s2-geometry-library-java-NOTICE.txt

-----

commons-logging-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

commons-logging-NOTICE.txt

-----

Apache Commons Logging

Copyright 2003-2013 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

asm-LICENSE-BSD\_LIKE.txt

-----

Copyright (c) 2012 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.

asm-NOTICE.txt

-----

commons-codec-LICENSE-ASL.txt

-----

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

commons-codec-NOTICE.txt

-----

Apache Commons Codec

Copyright 2002-2011 The Apache Software Foundation

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

-----

src/test/org/apache/commons/codec/language/DoubleMetaphoneTest.java contains test data from <http://aspell.sourceforge.net/test/batch0.tab>.

Copyright (C) 2002 Kevin Atkinson (kevin@gnu.org). Verbatim copying and distribution of this entire article is permitted in any medium, provided this notice is preserved.

-----

httpClient-LICENSE-ASL.txt

-----  
This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

This project contains annotations derived from JCIP-ANNOTATIONS Copyright (c) 2005 Brian Goetz and Tim Peierls. See <http://www.jcip.net> and the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/2.5>)

httpclient-NOTICE.txt

-----  
Apache HttpComponents Client

Copyright 1999-2011 The Apache Software Foundation

This product includes software developed by

The Apache Software Foundation (<http://www.apache.org/>).

This project contains annotations derived from JCIP-ANNOTATIONS

Copyright (c) 2005 Brian Goetz and Tim Peierls. See <http://www.jcip.net>

icu4j-LICENSE-BSD\_LIKE.txt

-----  
ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2012 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.

icu4j-NOTICE.txt

-----  
ICU4J, (under lucene/analysis/icu) is licensed under an MIT style license (modules/analysis/icu/lib/icu4j-LICENSE-BSD\_LIKE.txt) and Copyright (c) 1995-2012 International Business Machines Corporation and others

## A.30 ND4J 0.9.1 License

Copyright (C) 2017 Skymind

-----  
This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

-----  
PGX uses the following dependencies on ND4J:

nd4j-native-platform v. 0.9.1

```
<!--
~ /
~   Copyright 2015 Skymind, Inc.
~
~   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.
~ /
```

nd4j-native-api v. 0.9.1

Apache 2.0

nd4j-native v. 0.9.1

Apache 2.0

nd4j-api v. 0.9.1

Apache 2.0

nd4j-buffer v. 0.9.1

Apache 2.0

commons-lang3 v. 3.3.1

Apache 2.0

nd4j-context v. 0.9.1

Apache 2.0

nd4j-common v. 0.9.1

Apache 2.0

jackson v. 0.9.1  
nd4j-jackson v. 0.9.1  
Apache 2.0  
nd4j-base64 v. 0.9.1  
Apache 2.0  
openblas-platform v. 0.2.19-1.3  
Apache 2.0  
openblas v. 0.2.19-1.3  
Apache 2.0  
neoitertools v. 1.0.0  
Apache 2.0  
javacpp v. 1.3.3  
Apache 2.0  
reflections v. 0.9.11  
WTFPL  
<https://github.com/ronmamo/reflections/tree/0.9.11>  
<https://github.com/ronmamo/reflections/blob/master/COPYING.txt>

## A.31 OpenJPEG 2.1 License

```
/*
 * The copyright in this software is being made available under the 2-clauses
 * BSD License, included below. This software may be subject to other third
 * party and contributor rights, including patent rights, and no such rights
 * are granted under this license.
 *
 * Copyright (c) 2002-2014, Universite catholique de Louvain (UCL), Belgium
 * Copyright (c) 2002-2014, Professor Benoit Macq
 * Copyright (c) 2003-2014, Antonin Descampe
 * Copyright (c) 2003-2009, Francois-Olivier Devaux
 * Copyright (c) 2005, Herve Drolon, FreeImage Team
 * Copyright (c) 2002-2003, Yannick Verschueren
 * Copyright (c) 2001-2003, David Janssens
 * Copyright (c) 2011-2012, Centre National d'Etudes Spatiales (CNES), France
 * Copyright (c) 2012, CS Systemes d'Information, France
 * Copyright (c) 2011, Mathieu Malaterre <mathieu.malaterre@gmail.com>
 * Copyright (c) 2011, Mickael Savinaud, Communications & Systemes
 <mickael.savinaud@c-s.fr>
 * Copyright (c) 2006-2007, Parvatha Elangovan
 * Copyright (c) 2010-2011, Kaori Hagihara
 * Copyright (c) 2008, Jerome Fimes, Communications & Systemes
 <jerome.fimes@c-s.fr>
 * Copyright (C) 1998-2002, Toni Ronkko
 * Copyright (c) 2003-2005, Francois Devaux
 * Copyright (c) 2006, Mónica Díez García, Image Processing Laboratory,
 University of Valladolid, Spain
 * Copyright (c) 2002-2005, Communications and remote sensing Laboratory,
 Universite catholique de Louvain, Belgium
 * Copyright (c) 2011, Lucian Corlaci, GSoC
 * Copyright (c) 2007, Digital Signal Processing Laboratory, Università degli
```

```

studi di Perugia (UPG), Italy
* Copyright (c) 2007, Jonathan Ballard <dzonatas@dzonux.net>
* Copyright (c) 2007, Callum Lerwick <seg@haxxed.com>
* Copyright (c) 2011, Lucian Corlaci, GSoC
* Copyright (c) 2005-2006, Dept. of Electronic and Information Engineering,
Universita' degli Studi di Perugia, Italy
* Copyright (c) 2002-2007, Patrick Piscaglia, Telemis s.a.
*
* 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 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.
*/

```

---

liblcms2

Little CMS

Copyright (c) 1998-2010 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.

---

**libtiff**

```
/*
 * Copyright (c) 1988-1997 Sam Leffler
 * Copyright (c) 1991-1997 Silicon Graphics, Inc.
 * Copyright (c) 1997 Greg Ward Larson
 * Copyright (c) 1996 Pixar
 * Copyright (c) 2010, Andrey Kiselev dron@ak4719.spb.edu
 * Copyright (c) Joris Van Damme info@awaresystems.be
 * Copyright (c) AWARE Systems <http://www.awaresystems.be/>
 *
 * Permission to use, copy, modify, distribute, and sell this software and
 * its documentation for any purpose is hereby granted without fee, provided
 * that (i) the above copyright notices and this permission notice appear in
 * all copies of the software and related documentation, and (ii) the names of
 * Pixar, Greg Larson, Sam Leffler, or Silicon Graphics may not be used in
any
 * advertising or publicity relating to the software without the specific,
prior
 * written permission of Pixar, Greg Larson, Sam Leffler, or Silicon Graphics.
 *
 * THE SOFTWARE IS PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND,
 * EXPRESS, IMPLIED OR OTHERWISE, INCLUDING WITHOUT LIMITATION, ANY
 * WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
 *
 * IN NO EVENT SHALL PIXAR, GREG LARSON, SAM LEFFLER, OR SILICON GRAPHICS
 * BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES
 * OF ANY KIND, OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR
 * PROFITS, WHETHER OR NOT ADVISED OF THE POSSIBILITY OF DAMAGE, AND ON ANY
 * THEORY OF LIABILITY, ARISING OUT OF OR IN CONNECTION WITH THE USE OR
PERFORMANCE
 * OF THIS SOFTWARE.
 */
```

**libtiff/tif\_lzw.c**

```
/*
 * Copyright (c) 1985, 1986 The Regents of the University of California.
 * All rights reserved.
 *
 * This code is derived from software contributed to Berkeley by
 * James A. Woods, derived from original work by Spencer Thomas
 * and Joseph Orost.
 *
 * Redistribution and use in source and binary forms are permitted
 * provided that the above copyright notice and this paragraph are
 * duplicated in all such forms and that any documentation,
 * advertising materials, and other materials related to such
 * distribution and use acknowledge that the software was developed
 * by the University of California, Berkeley. The name of the
 * University may not be used to endorse or promote products derived
 * from this software without specific prior written permission.
 * THIS SOFTWARE IS PROVIDED ``AS IS'' AND WITHOUT ANY EXPRESS OR
 * IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED
```



\* WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.  
\*/

## A.32 PCRE 10.23 License

The following attribution text was taken from Component pcre Version 10.23

### PCRE2 LICENCE

-----

PCRE2 is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Release 10 of PCRE2 is distributed under the terms of the "BSD" licence, as specified below. The documentation for PCRE2, supplied in the "doc" directory, is distributed under the same terms as the software itself. The data in the testdata directory is not copyrighted and is in the public domain.

The basic library functions are written in C and are freestanding. Also included in the distribution is a just-in-time compiler that can be used to optimize pattern matching. This is an optional feature that can be omitted when the library is built.

### THE BASIC LIBRARY FUNCTIONS

-----

Written by: Philip Hazel  
Email local part: ph10  
Email domain: cam.ac.uk

University of Cambridge Computing Service,  
Cambridge, England.

Copyright (c) 1997-2017 University of Cambridge  
All rights reserved.

### PCRE2 JUST-IN-TIME COMPILATION SUPPORT

-----

Written by: Zoltan Herczeg  
Email local part: hzmester  
Email domain: freemail.hu

Copyright(c) 2010-2017 Zoltan Herczeg  
All rights reserved.

### STACK-LESS JUST-IN-TIME COMPILER

-----

Written by: Zoltan Herczeg  
Email local part: hzmester  
Email domain: freemail.hu

Copyright(c) 2009-2017 Zoltan Herczeg  
All rights reserved.

## THE "BSD" LICENCE

-----

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 University of Cambridge nor the names of any 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.

End

## A.33 PDFBox 2.0.12 License

Copyright (c) 2002-2007, [www.pdfbox.org](http://www.pdfbox.org)

<http://www.apache.org/licenses/>

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

### EXTERNAL COMPONENTS

Apache PDFBox includes a number of components with separate copyright notices and license terms. Your use of these components is subject to the terms and conditions of the following licenses.

Contributions made to the original PDFBox, JempBox and FontBox projects:

Copyright (c) 2002-2007, [www.pdfbox.org](http://www.pdfbox.org)

Copyright (c) 2006-2007, [www.jempbox.org](http://www.jempbox.org)

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 pdfbox; 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.

#### Adobe Font Metrics (AFM) for PDF Core 14 Fonts

This file and the 14 PostScript(R) AFM files it accompanies may be used, copied, and distributed for any purpose and without charge, with or without modification, provided that all copyright notices are retained; that the AFM files are not distributed without this file; that all modifications to this file or any of the AFM files are prominently noted in the modified file(s); and that this paragraph is not modified. Adobe Systems has no responsibility or obligation to support the use of the AFM files.

CMaps for PDF Fonts (<http://opensource.adobe.com/wiki/display/cmap/Downloads>)

Copyright 1990-2009 Adobe Systems Incorporated.

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 Adobe Systems Incorporated 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.

Glyphlist (<http://www.adobe.com/devnet/opentype/archives/glyph.html>)

Copyright (c) 1997,1998,2002,2007 Adobe Systems Incorporated

Permission is hereby granted, free of charge, to any person obtaining a copy of this documentation file to use, copy, publish, distribute, sublicense, and/or sell copies of the documentation, and to permit others to do the same, provided that:

- No modification, editing or other alteration of this document is allowed; and
- The above copyright notice and this permission notice shall be included in all copies of the documentation.

Permission is hereby granted, free of charge, to any person obtaining a copy of this documentation file, to create their own derivative works from the content of this document to use, copy, publish, distribute, sublicense, and/or sell the derivative works, and to permit others to do the same, provided that the derived work is not represented as being a copy or version of this document.

Adobe shall not be liable to any party for any loss of revenue or profit or for indirect, incidental, special, consequential, or other similar damages, whether based on tort (including without limitation negligence or strict liability), contract or other legal or equitable grounds even if Adobe has been advised or had reason to know of the possibility of such damages. The Adobe materials are provided on an "AS IS" basis. Adobe specifically disclaims all express, statutory, or implied warranties relating to the Adobe materials, including but not limited to those concerning merchantability or fitness for a particular purpose or non-infringement of any third party rights regarding the Adobe materials.

PaDaF PDF/A preflight (<http://sourceforge.net/projects/padaf>)

Copyright 2010 Atos Worldline SAS

Licensed by Atos Worldline SAS under one or more contributor license agreements. See the NOTICE file distributed with this work for additional information regarding copyright ownership. Atos Worldline SAS licenses this file to You 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.

Fontbox Licence

See [The Apache Software License, Version 2.0](#)

CONTRIBUTIONS TO THE ORIGINAL CODEBASE

Apache FontBox is based on contributions made to the original FontBox project:

Copyright (c) 2006-2007, [www.fontbox.org](http://www.fontbox.org)

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 fontbox; 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.

## A.34 Perl 5.28.1 License

Perl5 is Copyright (C) 1993-2017, by Larry Wall and others. It is free software; you can redistribute it and/or modify it under the terms of either:

1. The GNU General Public License as published by the Free Software Foundation (<http://www.fsf.org/>). You can opt to use either version 1 (<http://dev.perl.org/licenses/gpl1.html>), or any later version (<http://www.fsf.org/licensing/licenses/#GNU GPL>).
2. The "Artistic License" (<http://dev.perl.org/licenses/artistic.html>)

The DBI module is Copyright (c) 1994-2000 Tim Bunce. England.

All rights reserved.

You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl README file. For the most recent license agreement terms, see <http://dev.perl.org/licenses/>.

=====

This product is licensed under the Artistic License. See [Artistic License](#).

Perl5 is Copyright (C) 1993-2005, by Larry Wall and others. It is free software; you can redistribute it and/or modify it under the terms of either:

1. The GNU General Public License as published by the Free Software Foundation (<http://www.fsf.org/>). You can opt to use either version 1 (<http://dev.perl.org/licenses/gpl1.html>), or any later version (<http://www.fsf.org/licensing/licenses/#GNU GPL>).
2. The "Artistic License" (<http://dev.perl.org/licenses/artistic.html>)

The DBI module is Copyright (c) 1994-2000 Tim Bunce. England.

All rights reserved.

You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl README file. For the most recent license agreement terms, see <http://dev.perl.org/licenses/>.

"Apache" License in source files

1. Build Modules (Module-Build)

The distribution is licensed under the Apache License, Version 2.0

The distribution is licensed under the Apache Software License, Version 1.1

Instances of "Artistic"

Perl most modules

The "Artistic License"

the "Artistic License" which comes with this Kit.

the GNU General Public License or the Artistic License for more details.

Instances of "Berkeley"

File-Glob module

This code is derived from software contributed to Berkeley

This code is derived from software contributed to Berkeley

This code is derived from software contributed to Berkeley

Instances of "BSD"

CPAN modules - internal, File-Temp, CPAN-Meta

Dist module

Instances of "CDDL"

None

Instances of "Common Public"

None

Instances of "Copyright"

Symbian Module

"Copyright (c) 2004-2005 Nokia. All rights reserved."

"Copyright 1987-2005 Larry Wall and others, Symbian port Copyright Nokia 2004-2005"

Unicode module

Copyright (c) 1991-2012 Unicode, Inc.

Netware module

Copyright © 2001 Novell, Inc. All Rights Reserved.

Porting module

Copyright (C) 2005-2012 by H.Merijn Brand (m)'12 [22-09-2012]

Pod module

Copyright (C) 1989 Free Software Foundation, Inc.

Richard Foley <richard.foley@rfi.net> Copyright (c) 2000

cpan/Text-Soundex module

(c) Copyright 1998-2007 by Mark Mielke

cpan/libnet module

Copyright (c) 1995-2006 Graham Barr <gbarr@pobox.com>. All rights reserved.

cpan/memoize module

Copyright 1998, 1999, 2000, 2001, 2012 M. J. Dominus.

cpan/CGI module

Copyright 1995-2000, Lincoln D. Stein. All rights reserved.

cpan/Digest-SHA module

Copyright (C) 2003-2013 Mark Shelor, All Rights Reserved

cpan/Perl-OSType module

This software is copyright (c) 2013 by David Golden.

cpan/Digest module

Copyright 1998-2006 Gisle Aas.

Copyright 1995,1996 Neil Winton.

cpan/Text-Balanced module

Copyright 1997 - 2001 Damian Conway. All Rights Reserved.

Some (minor) parts copyright 2009 Adam Kennedy.

cpan/Term-ANSIColor

Copyright 1996 Zenin

Copyright 2012 Kurt Starsinic <kstarsinic@gmail.com>

Copyright 2011 Revilo Reegiles

Copyright 2012, 2013 Russ Allbery <rra@stanford.edu>

cpan/Time-HiRes module

Copyright (c) 1996-2002 Douglas E. Wegscheid. All rights reserved.

Copyright (c) 2002-2010 Jarkko Hietaniemi.

Copyright (C) 2011, 2012 Andrew Main (Zefram) <zefram@fysh.org>

cpan/Locale-Maketext-Simple module

Copyright (C) All Perl Hackers everywhere

cpan/Pod-Checker module

Copyright (C) 1994-2000 by Bradford Appleton. All rights reserved.

cpan/Devel-PPPort module

Version 3.x, Copyright (C) 2004-2010, Marcus Holland-Moritz.

Version 2.x, Copyright (C) 2001, Paul Marquess.

Version 1.x, Copyright (C) 1999, Kenneth Albanowski.

cpan/Time-Piece module

Copyright (c) 1994 Powerdog Industries. All rights reserved.

cpan/Locale-Codes module

Copyright (C) 2001 Canon Research Centre Europe (CRE).

Copyright (c) 2010-2013 Sullivan Beck

Copyright (c) 2001-2010 Neil Bowers

Copyright (c) 1997-2001 Canon Research Centre Europe (CRE).

Copyright (c) 2001 Michael Hennecke

cpan/List-Util module

Copyright (c) 1997-2007 Graham Barr <gbarr@pobox.com>. All rights reserved.

cpan/MIME-Base64 module

Copyright (c) 1991 Bell Communications Research, Inc. (Bellcore)

cpan/Pod-Usage module

Copyright (c) 1996-2000 by Bradford Appleton. All rights reserved.

cpan/Digest-MD5

Copyright 1998-2000 Gisle Aas.

Copyright 1995-1996 Neil Winton.

Copyright 1991-1992 RSA Data Security, Inc.

cpan/CPAN-Meta-Requirements module

This software is copyright (c) 2010 by David Golden and Ricardo Signes.

cpan/Filter-Util-Call module

Copyright (c) 1995-2011 Paul Marquess. All rights reserved.

cpan/GetOpt-Long module

This program is Copyright 1990,2010 by Johan Vromans.

cpan/Pod-Parser module

Copyright (c) 1996-2000 by Bradford Appleton. All rights reserved.

Copyright (C) 1999-2000 by Marek Rouchal (and borrowing code

Copyright 1999-2000 by Russ Allbery <rra@stanford.edu>

Copyright (C) 2005 Joshua Hoblitt

cpan/Test-Harness module

Portions copyright 2006-2008 Adam Kennedy.

cpan/CPAN-Meta-YAML module

This software is copyright (c) 2010 by Adam Kennedy.

cpan/IO-Zlib module

Copyright (c) 1998-2004 Tom Hughes <tom@compton.nu>.

cpan/Compress-Raw-Bzip2 module

Copyright (c) 2005-2013 Paul Marquess. All rights reserved.

Copyright (C) 1996-2010 Julian Seward <jseward@bzip.org>

Copyright (c) 1995-2012 Paul Marquess. All rights reserved.

cpan/CPAN-Meta module

This software is copyright (c) 2010 by David Golden and Ricardo Signes.

cpan/IPC-SysV module

Version 2.x, Copyright (C) 2007-2010, Marcus Holland-Moritz <mhx@cpan.org>.

Version 1.x, Copyright (C) 1997, Graham Barr <gbarr@pobox.com>.

cpan/podlators module

Copyright 2002, 2004, 2006, 2008, 2009, 2012 Russ Allbery <rra@stanford.edu>

Copyright 2000 Joe Smith <Joe.Smith@inwap.com>.

cpan/IO-compress module

Copyright (c) 1995-2013 Paul Marquess. All rights reserved.

cpan/Unicode-Collate module

Copyright (c) 2001-2012 Unicode, Inc.

cpan/Module-Metadata module

Original code Copyright (c) 2001-2011 Ken Williams.

Additional code Copyright (c) 2010-2011 Matt Trout and David Golden.

Copyright 1997 Christopher J. Madsen

This module is copyright (c) 2002 - 2009 Jos Boumans

cpan/Module-Build module

This documentation is Copyright (C) 2009 by David Golden. You can redistribute

cpan/Sys-Syslog module

Copyright (C) 1990-2012 by Larry Wall and others.

cpan/NEXT module



Copyright (c) 2000-2001, Damian Conway. All Rights Reserved.

cpan/HTTP-Tiny module

This software is copyright (c) 2012 by Christian Hansen.

cpan/Compress-Raw-Zlib module

Copyright (C) 1995-2006, 2010, 2011, 2012 Mark Adler

Copyright (C) 1995-2012 Jean-loup Gailly.

Copyright (C) 1995-2003, 2010 Jean-loup Gailly.

Perly header

Copyright (C) 1984, 1989-1990, 2000-2012 Free Software Foundation, Inc.

vms module

Symbol shortening Copyright (c) 2012 Craig A. Berry

Copyright (C) 1993-2013 by Charles Bailey and others.

Copyright 1996 by Charles Bailey <bailey@newman.upenn.edu>

PerlIO module

Copyright (c) 1996-2006, Nick Ing-Simmons

Copyright (c) 2006, 2007, 2008, 2009, 2010, 2011 Larry Wall and others

ext/DynaLoader

This is an unpublished work copyright (c) 1992 Helios Software GmbH

Copyright (c) 1994, Larry Wall

ext/Win32CORE module

Copyright (C) 2007 by Larry Wall and others

ext/B module

Copyright (c) 1996, 1997, 1998 Malcolm Beattie

Copyright (C) 2000-2003 Stephen McCamant. All rights reserved.

ext/mro module

Copyright (c) 2007 Brandon L Black

Copyright (c) 2008,2009 Larry Wall and others

ext/XS-Typemap module

Copyright (C) 2001 Tim Jenness.

ext/File-Glob module

Copyright (c) 1989, 1993 The Regents of the University of California.

dist/Filer-Simple module

Copyright (c) 2000-2008, Damian Conway. All Rights Reserved.

dist/IO module

Copyright (c) 1997-8 Graham Barr <gbarr@pobox.com>. All rights reserved.

The atmark() implementation: Copyright 2001, Lincoln Stein <lstein@cshl.org>.

dist/Storable module

Copyright (c) 1995-2000, Raphael Manfredi

Copyright (c) 2001-2004, Larry Wall

Copyright 2005, Adam Kennedy.

Copyright 2002, Larry Wall.

Copyright (c) 2002 Slaven Rezac

Copyright (c) 1995-2000, Raphael Manfredi

dist/Attribute-Handlers module

Copyright (c) 2001-2009, Damian Conway. All Rights Reserved.

dist/Locale-Maketext module  
copyright 1999 The Perl Journal.

dist/threads-shared module  
Copyright (c) 2001-2002, 2006 Larry Wall

dist/B-Deparse module  
Copyright (c) 1998-2000, 2002, 2003, 2004, 2005, 2006 Stephen McCamant.

dist/Cwd module  
Copyright (c) 2003 Constantin S. Svintsoff <kostik@iclub.nsu.ru>

dist/ExtUtils-CBuilder module  
This software is copyright (c) 2012 by Ken Williams.  
Copyright (C) 1989 Free Software Foundation, Inc.

Instances of "CPL"  
None

Instances of "Creative Commons"  
None

Instances of "Eclipse"  
cpan/perlfaq lib: The Eclipse Perl Integration Project integrates Perl

Instances of "EPL"  
None

Instances of "Free Documentation"  
cpan/CPAN-Meta: GNU Free Documentation License, Version 1.2  
cpan/CPAN-Meta: GNU Free Documentation License, Version 1.3

Instances of "General Public"  
None

Instances of "GNU"  
Mostly all modules: You may distribute under the terms of either the GNU General Public

Instances of "GPL"  
cpan/Term-ANSIColor/README: GPL and the Artistic License.

Instances of "LGPL"  
CPAN, CPANPLUS, CPAN-Meta and Module-Build mentions LGPL: "GNU Lesser General Public License"

Instances of "License"  
Most of the Perl Modules  
Artistic License  
GNU GENERAL PUBLIC LICENSE  
time64 module: MIT License  
Apache  
LGPL  
BSD  
CPAN/Meta module: Mozilla

Instances of "MIT"  
time64 module: The MIT License:  
build/API: The distribution is licensed under the MIT License

Instances of "Mozilla"  
cpan/CPAN-Meta: mozilla\_1\_0 Mozilla Public License, Version 1.0

cpan/CPAN-Meta: mozilla\_1\_1 Mozilla Public License, Version 1.1

Instances of "MPL"

None..

Instances of "Share Alike"

None

README:

Perl is Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012 by Larry Wall and others. All rights reserved.

## ABOUT PERL

=====

Perl is a general-purpose programming language originally developed for text manipulation and now used for a wide range of tasks including system administration, web development, network programming, GUI development, and more.

The language is intended to be practical (easy to use, efficient, complete) rather than beautiful (tiny, elegant, minimal). Its major features are that it's easy to use, supports both procedural and object-oriented (OO) programming, has powerful built-in support for text processing, and has one of the world's most impressive collections of third-party modules.

For an introduction to the language's features, see `pod/perlintro.pod`.

For a discussion of the important changes in this release, see `pod/perldelta.pod`.

There are also many Perl books available, covering a wide variety of topics, from various publishers. See `pod/perlbook.pod` for more information.

## LICENSING

=====

This program is free software; you can redistribute it and/or modify it under the terms of either:

- a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or
- b) the "Artistic License" which comes with this Kit.

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 either the GNU General Public License or the Artistic License for more details.

You should have received a copy of the Artistic License with this Kit, in the file named "Artistic". If not, I'll be glad to provide one.

You should also have received a copy of the GNU General Public License along with this program in the file named "Copying". If not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA or visit their web page on the internet at <http://www.gnu.org/copyleft/gpl.html>.

For those of you that choose to use the GNU General Public License, my interpretation of the GNU General Public License is that no Perl script falls under the terms of the GPL unless you explicitly put said script under the terms of the GPL yourself. Furthermore, any object code linked with perl does not automatically fall under the terms of the GPL, provided such object code only adds definitions of subroutines and variables, and does not otherwise impair the resulting interpreter from executing any standard Perl script. I consider linking in C subroutines

in this manner to be the moral equivalent of defining subroutines in the Perl language itself. You may sell such an object file as proprietary provided that you provide or offer to provide the Perl source, as specified by the GNU General Public License. (This is merely an alternate way of specifying input to the program.) You may also sell a binary produced by the dumping of a running Perl script that belongs to you, provided that you provide or offer to provide the Perl source as specified by the GPL. (The fact that a Perl interpreter and your code are in the same binary file is, in this case, a form of mere aggregation.) This is my interpretation of the GPL. If you still have concerns or difficulties understanding my intent, feel free to contact me. Of course, the Artistic License spells all this out for your protection, so you may prefer to use that.

## A.35 Perl DBI 1.642 License

Source code for modules available under the Perl (Artistic) license may be available at <http://www.cpan.org/modules/index.html> or follow the instructions to obtain source code found at <https://www.oracle.com/downloads/opensource.html>.

The DBI module is Copyright (c) 1994-2015 Tim Bunce. Ireland.

All rights reserved. You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl 5.10.0 README file.

The Artistic License

Preamble

The intent of this document is to state the conditions under which a Package may be copied, such that the Copyright Holder maintains some semblance of artistic control over the development of the package, while giving the users of the package the right to use and distribute the Package in a more-or-less customary fashion, plus the right to make reasonable modifications.

Definitions:

"Package" refers to the collection of files distributed by the Copyright Holder, and derivatives of that collection of files created through textual modification.

"Standard Version" refers to such a Package if it has not been modified, or has been modified in accordance with the wishes of the Copyright Holder.

"Copyright Holder" is whoever is named in the copyright or copyrights for the package.

"You" is you, if you're thinking about copying or distributing this Package.

"Reasonable copying fee" is whatever you can justify on the basis of media cost, duplication charges, time of people involved, and so on. (You will not be required to justify it to the Copyright Holder, but only to the computing community at large as a market that must bear the fee.)

"Freely Available" means that no fee is charged for the item itself, though there may be fees involved in handling the item. It also means that recipients of the item may redistribute it under the same conditions they received it.

1. You may make and give away verbatim copies of the source form of the Standard Version of this Package without restriction, provided that you duplicate all of the original copyright notices and associated disclaimers.

2. You may apply bug fixes, portability fixes and other modifications derived from the Public Domain or from the Copyright Holder. A Package modified in such a way shall still be considered the Standard Version.

3. You may otherwise modify your copy of this Package in any way, provided that you insert a prominent notice in each changed file stating how and when you changed that file, and provided that you do at least ONE of the following:
  - a) place your modifications in the Public Domain or otherwise make them Freely Available, such as by posting said modifications to Usenet or an equivalent medium, or placing the modifications on a major archive site such as ftp.uu.net, or by allowing the Copyright Holder to include your modifications in the Standard Version of the Package.
  - b) use the modified Package only within your corporation or organization.
  - c) rename any non-standard executables so the names do not conflict with standard executables, which must also be provided, and provide a separate manual page for each non-standard executable that clearly documents how it differs from the Standard Version.
  - d) make other distribution arrangements with the Copyright Holder.
4. You may distribute the programs of this Package in object code or executable form, provided that you do at least ONE of the following:
  - a) distribute a Standard Version of the executables and library files, together with instructions (in the manual page or equivalent) on where to get the Standard Version.
  - b) accompany the distribution with the machine-readable source of the Package with your modifications.
  - c) accompany any non-standard executables with their corresponding Standard Version executables, giving the non-standard executables non-standard names, and clearly documenting the differences in manual pages (or equivalent), together with instructions on where to get the Standard Version.
  - d) make other distribution arrangements with the Copyright Holder.
5. You may charge a reasonable copying fee for any distribution of this Package. You may charge any fee you choose for support of this Package. You may not charge a fee for this Package itself. However, you may distribute this Package in aggregate with other (possibly commercial) programs as part of a larger (possibly commercial) software distribution provided that you do not advertise this Package as a product of your own.
6. The scripts and library files supplied as input to or produced as output from the programs of this Package do not automatically fall under the copyright of this Package, but belong to whomever generated them, and may be sold commercially, and may be aggregated with this Package.
7. C or perl subroutines supplied by you and linked into this Package shall not be considered part of this Package.
8. The name of the Copyright Holder may not be used to endorse or promote products derived from this software without specific prior written permission.
9. THIS PACKAGE IS PROVIDED "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

Perl5 is Copyright (C) 1993-2005, by Larry Wall and others. It is free software; you can redistribute it and/or modify it under the terms of either:

1. The GNU General Public License as published by the Free Software Foundation (<http://www.fsf.org/>). You can opt to use either version 1 (<http://dev.perl.org/licenses/gpl1.html>), or any later version (<http://www.fsf.org/licenses/licenses/#GNUGPL>).

2. The "Artistic License" (<http://dev.perl.org/licenses/artistic.html>) The DBI module is Copyright (c) 1994-2000 Tim Bunce. England.

All rights reserved.

You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl README file. For the most recent license agreement terms, see <http://dev.perl.org/licenses/>.

Oracle distributes these modules under the Artistic License.

For a copy of the license, see [Artistic License](#).

Perl5 is Copyright (C) 1993-2005, by Larry Wall and others. It is free software; you can redistribute it and/or modify it under the terms of either:

1. The GNU General Public License as published by the Free Software Foundation (<http://www.fsf.org/>). You can opt to use either version 1 (<http://dev.perl.org/licenses/gpl1.html>), or any later version (<http://www.fsf.org/licensing/licenses/#GNU GPL>).
2. The "Artistic License" (<http://dev.perl.org/licenses/artistic.html>)

The DBI module is Copyright (c) 1994-2000 Tim Bunce. England.

All rights reserved.

You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl README file. For the most recent license agreement terms, see <http://dev.perl.org/licenses/>.

"Apache" License in source files

#### 1. Build Modules (Module-Build)

The distribution is licensed under the Apache License, Version 2.0

The distribution is licensed under the Apache Software License, Version 1.1

Instances of "Berkeley"

File-Glob module

This code is derived from software contributed to Berkeley

Instances of "BSD"

CPAN modules - internal, File-Temp, CPAN-Meta

Dist module

Symbian Module

"Copyright (c) 2004-2005 Nokia. All rights reserved."

"Copyright 1987-2005 Larry Wall and others, Symbian port Copyright Nokia 2004-2005"

Unicode module

Copyright (c) 1991-2012 Unicode, Inc.

Netware module

Copyright (c) 2001 Novell, Inc. All Rights Reserved.

Porting module

Copyright (C) 2005-2012 by H.Merijn Brand (m)'12 [22-09-2012]

Pod module

Copyright (C) 1989 Free Software Foundation, Inc.

Richard Foley <[richard.foley@rfi.net](mailto:richard.foley@rfi.net)> Copyright (c) 2000

cpan/Text-Soundex module

(c) Copyright 1998-2007 by Mark Mielke

cpan/libnet module

Copyright (c) 1995-2006 Graham Barr <gbarr@pobox.com>. All rights reserved.

cpan/memoize module

Copyright 1998, 1999, 2000, 2001, 2012 M. J. Dominus.

cpan/CGI module

Copyright 1995-2000, Lincoln D. Stein. All rights reserved.

cpan/Digest-SHA module

Copyright (C) 2003-2013 Mark Shelor, All Rights Reserved

cpan/Perl-OSType module

This software is copyright (c) 2013 by David Golden.

cpan/Digest module

Copyright 1998-2006 Gisle Aas.

Copyright 1995,1996 Neil Winton.

cpan/Text-Balanced module

Copyright 1997 - 2001 Damian Conway. All Rights Reserved.

Some (minor) parts copyright 2009 Adam Kennedy.

cpan/Term-ANSIColor

Copyright 1996 Zenin

Copyright 2012 Kurt Starsinic <kstarsinic@gmail.com>

Copyright 2011 Revilo Reegiles

Copyright 2012, 2013 Russ Allbery <rra@stanford.edu>

cpan/Time-HiRes module

Copyright (c) 1996-2002 Douglas E. Wegscheid. All rights reserved.

Copyright (c) 2002-2010 Jarkko Hietaniemi.

Copyright (C) 2011, 2012 Andrew Main (Zefram) <zefram@fysh.org>

cpan/Locale-Maketext-Simple module

Copyright (C) All Perl Hackers everywhere

cpan/Pod-Checker module

Copyright (C) 1994-2000 by Bradford Appleton. All rights reserved.

cpan/Devel-PPPort module

Version 3.x, Copyright (C) 2004-2010, Marcus Holland-Moritz.

Version 2.x, Copyright (C) 2001, Paul Marquess.

Version 1.x, Copyright (C) 1999, Kenneth Albanowski.

cpan/Time-Piece module

Copyright (c) 1994 Powerdog Industries. All rights reserved.

cpan/Locale-Codes module

Copyright (C) 2001 Canon Research Centre Europe (CRE).

Copyright (c) 2010-2013 Sullivan Beck

Copyright (c) 2001-2010 Neil Bowers

Copyright (c) 1997-2001 Canon Research Centre Europe (CRE).

Copyright (c) 2001 Michael Hennecke

cpan/List-Util module

Copyright (c) 1997-2007 Graham Barr <gbarr@pobox.com>. All rights reserved.

cpan/MIME-Base64 module



Copyright (c) 1991 Bell Communications Research, Inc. (Bellcore)

cpan/Pod-Usage module

Copyright (c) 1996-2000 by Bradford Appleton. All rights reserved.

cpan/Digest-MD5

Copyright 1998-2000 Gisle Aas.

Copyright 1995-1996 Neil Winton.

Copyright 1991-1992 RSA Data Security, Inc.

cpan/CPAN-Meta-Requirements module

This software is copyright (c) 2010 by David Golden and Ricardo Signes.

cpan/Filter-Util-Call module

Copyright (c) 1995-2011 Paul Marquess. All rights reserved.

cpan/GetOpt-Long module

This program is Copyright 1990,2010 by Johan Vromans.

cpan/Pod-Parser module

Copyright (c) 1996-2000 by Bradford Appleton. All rights reserved.

Copyright (C) 1999-2000 by Marek Rouchal (and borrowing code

Copyright 1999-2000 by Russ Allbery <rra@stanford.edu>

Copyright (C) 2005 Joshua Hoblitt

cpan/Test-Harness module

Portions copyright 2006-2008 Adam Kennedy.

cpan/CPAN-Meta-YAML module

This software is copyright (c) 2010 by Adam Kennedy.

cpan/IO-Zlib module

Copyright (c) 1998-2004 Tom Hughes <tom@compton.nu>.

cpan/Compress-Raw-Bzip2 module

Copyright (c) 2005-2013 Paul Marquess. All rights reserved.

Copyright (C) 1996-2010 Julian Seward <jseward@bzip.org>

Copyright (c) 1995-2012 Paul Marquess. All rights reserved.

cpan/CPAN-Meta module

This software is copyright (c) 2010 by David Golden and Ricardo Signes.

cpan/IPC-SysV module

Version 2.x, Copyright (C) 2007-2010, Marcus Holland-Moritz <mhx@cpan.org>.

Version 1.x, Copyright (C) 1997, Graham Barr <gbarr@pobox.com>.

cpan/podlators module

Copyright 2002, 2004, 2006, 2008, 2009, 2012 Russ Allbery <rra@stanford.edu>

Copyright 2000 Joe Smith <Joe.Smith@inwap.com>.

cpan/IO-compress module

Copyright (c) 1995-2013 Paul Marquess. All rights reserved.

cpan/Unicode-Collate module

Copyright (c) 2001-2012 Unicode, Inc.

cpan/Module-Metadata module

Original code Copyright (c) 2001-2011 Ken Williams.

Additional code Copyright (c) 2010-2011 Matt Trout and David Golden.

Copyright 1997 Christopher J. Madsen

This module is copyright (c) 2002 - 2009 Jos Boumans



cpan/Module-Build module

This documentation is Copyright (C) 2009 by David Golden. You can redistribute

cpan/Sys-Syslog module

Copyright (C) 1990-2012 by Larry Wall and others.

cpan/NEXT module

Copyright (c) 2000-2001, Damian Conway. All Rights Reserved.

cpan/HTTP-Tiny module

This software is copyright (c) 2012 by Christian Hansen.

cpan/Compress-Raw-Zlib module

Copyright (C) 1995-2006, 2010, 2011, 2012 Mark Adler

Copyright (C) 1995-2012 Jean-loup Gailly.

Copyright (C) 1995-2003, 2010 Jean-loup Gailly.

Perly header

Copyright (C) 1984, 1989-1990, 2000-2012 Free Software Foundation, Inc.

vms module

Symbol shortening Copyright (c) 2012 Craig A. Berry

Copyright (C) 1993-2013 by Charles Bailey and others.

Copyright 1996 by Charles Bailey <bailey@newman.upenn.edu>

PerlIO module

Copyright (c) 1996-2006, Nick Ing-Simmons

Copyright (c) 2006, 2007, 2008, 2009, 2010, 2011 Larry Wall and others

ext/DynaLoader

This is an unpublished work copyright (c) 1992 Helios Software GmbH

Copyright (c) 1994, Larry Wall

ext/Win32CORE module

Copyright (C) 2007 by Larry Wall and others

ext/B module

Copyright (c) 1996, 1997, 1998 Malcolm Beattie

Copyright (C) 2000-2003 Stephen McCamant. All rights reserved.

ext/mro module

Copyright (c) 2007 Brandon L Black

Copyright (c) 2008,2009 Larry Wall and others

ext/XS-Typemap module

Copyright (C) 2001 Tim Jenness.

ext/File-Glob module

Copyright (c) 1989, 1993 The Regents of the University of California.

dist/Filer-Simple module

Copyright (c) 2000-2008, Damian Conway. All Rights Reserved.

dist/IO module

Copyright (c) 1997-8 Graham Barr <gbarr@pobox.com>. All rights reserved.

The atmark() implementation: Copyright 2001, Lincoln Stein <lstein@cshl.org>.

dist/Storable module

Copyright (c) 1995-2000, Raphael Manfredi

Copyright (c) 2001-2004, Larry Wall

Copyright 2005, Adam Kennedy.

Copyright 2002, Larry Wall.

Copyright (c) 2002 Slaven Rezac

Copyright (c) 1995-2000, Raphael Manfredi

dist/Attribute-Handlers module

Copyright (c) 2001-2009, Damian Conway. All Rights Reserved.

dist/Locale-Maketext module

copyright 1999 The Perl Journal.

dist/threads-shared module

Copyright (c) 2001-2002, 2006 Larry Wall

dist/B-Deparse module

Copyright (c) 1998-2000, 2002, 2003, 2004, 2005, 2006 Stephen McCamant.

dist/Cwd module

Copyright (c) 2003 Constantin S. Svintsoff <kostik@iclub.nsu.ru>

dist/ExtUtils-CBuilder module

This software is copyright (c) 2012 by Ken Williams.

Copyright (C) 1989 Free Software Foundation, Inc.

Instances of "Eclipse"

cpan/perlfaq lib: The Eclipse Perl Integration Project integrates Perl

Instances of "Free Documentation"

cpan/CPAN-Meta: GNU Free Documentation License, Version 1.2

cpan/CPAN-Meta: GNU Free Documentation License, Version 1.3

Instances of "LGPL"

CPAN, CPANPLUS, CPAN-Meta and Module-Build mentions LGPL: "GNU Lesser General Public License"

Instances of "MIT"

time64 module: The MIT License:

build/API: The distribution is licensed under the MIT License

Instances of "Mozilla"

cpan/CPAN-Meta: mozilla\_1\_0 Mozilla Public License, Version 1.0

cpan/CPAN-Meta: mozilla\_1\_1 Mozilla Public License, Version 1.1

## README:

Perl is Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012 by Larry Wall and others. All rights reserved.

## ABOUT PERL

=====

Perl is a general-purpose programming language originally developed for text manipulation and now used for a wide range of tasks including system administration, web development, network programming, GUI development, and more.

The language is intended to be practical (easy to use, efficient, complete) rather than beautiful (tiny, elegant, minimal). Its major features are that it's easy to use, supports both procedural and object-oriented (OO) programming, has powerful built-in support for text processing, and has one of the world's most impressive collections of third-party modules.

For an introduction to the language's features, see `pod/perlintro.pod`.

For a discussion of the important changes in this release, see `pod/perldelta.pod`.

## A.36 Protocol Buffers (aka Google protobuf) 3.5.1 License

Here is the content of the LICENSE file in `protobuf-java-3.5.1.zip` downloaded from <https://github.com/google/protobuf/releases/tag/v3.5.1>.

This license applies to all parts of Protocol Buffers except the following:

- Atomicops support for generic gcc, located in `src/google/protobuf/stubs/atomicops_internals_generic_gcc.h`. This file is copyrighted by Red Hat Inc.
- Atomicops support for AIX/POWER, located in `src/google/protobuf/stubs/atomicops_internals_power.h`. This file is copyrighted by Bloomberg Finance LP.

Copyright 2014, 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.

-----  
File: `atomicops_internals_power.h`

```
// Copyright 2014 Bloomberg Finance LP. 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 Bloomberg Finance LP. 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.

// This file is an internal atomic implementation, use atomicops.h instead.

-----
File: atomicops_internals_generic_gcc.h

// Copyright 2013 Red Hat 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 Red Hat 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.

// This file is an internal atomic implementation, use atomicops.h instead.
```

## A.37 Python 3.7.1 License

Copyright © 2001-2018 Python Software Foundation. All rights reserved.

Copyright © 2000 BeOpen.com. All rights reserved.

Copyright © 1995-2000 Corporation for National Research Initiatives. All rights reserved.

Copyright © 1991-1995 Stichting Mathematisch Centrum. All rights reserved.

From the LICENSE file:

### B. TERMS AND CONDITIONS FOR ACCESSING OR OTHERWISE USING PYTHON

=====

#### PYTHON SOFTWARE FOUNDATION LICENSE VERSION 2

-----

1. This LICENSE AGREEMENT is between the Python Software Foundation ("PSF"), and the Individual or Organization ("Licensee") accessing and otherwise using this software ("Python") in source or binary form and its associated documentation.
2. Subject to the terms and conditions of this License Agreement, PSF hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python alone or in any derivative version, provided, however, that PSF's License Agreement and PSF's notice of copyright, i.e., "Copyright (c) 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017 Python Software Foundation; All Rights Reserved" are retained in Python alone or in any derivative version prepared by Licensee.
3. In the event Licensee prepares a derivative work that is based on or incorporates Python or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python.
4. PSF is making Python available to Licensee on an "AS IS" basis. PSF MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.
6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.
7. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between PSF and Licensee. This License Agreement does not grant permission to use PSF trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.
8. By copying, installing or otherwise using Python, Licensee agrees to be bound by the terms and conditions of this License Agreement.

## BEOPEN.COM LICENSE AGREEMENT FOR PYTHON 2.0

---

### BEOPEN PYTHON OPEN SOURCE LICENSE AGREEMENT VERSION 1

1. This LICENSE AGREEMENT is between BeOpen.com ("BeOpen"), having an office at 160 Saratoga Avenue, Santa Clara, CA 95051, and the Individual or Organization ("Licensee") accessing and otherwise using this software in source or binary form and its associated documentation ("the Software").
2. Subject to the terms and conditions of this BeOpen Python License Agreement, BeOpen hereby grants Licensee a non-exclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use the Software alone or in any derivative version, provided, however, that the BeOpen Python License is retained in the Software, alone or in any derivative version prepared by Licensee.
3. BeOpen is making the Software available to Licensee on an "AS IS" basis. BEOPEN MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, BEOPEN MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
4. BEOPEN SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF THE SOFTWARE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF USING, MODIFYING OR DISTRIBUTING THE SOFTWARE, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.
5. This License Agreement will automatically terminate upon a material breach of its terms and conditions.
6. This License Agreement shall be governed by and interpreted in all respects by the law of the State of California, excluding conflict of law provisions. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between BeOpen and Licensee. This License Agreement does not grant permission to use BeOpen trademarks or trade names in a trademark sense to endorse or promote products or services of Licensee, or any third party. As an exception, the "BeOpen Python" logos available at <http://www.pythonlabs.com/logos.html> may be used according to the permissions granted on that web page.
7. By copying, installing or otherwise using the software, Licensee agrees to be bound by the terms and conditions of this License Agreement.

### CNRI LICENSE AGREEMENT FOR PYTHON 1.6.1

---

1. This LICENSE AGREEMENT is between the Corporation for National Research Initiatives, having an office at 1895 Preston White Drive, Reston, VA 20191 ("CNRI"), and the Individual or Organization ("Licensee") accessing and otherwise using Python 1.6.1 software in source or binary form and its associated documentation.
2. Subject to the terms and conditions of this License Agreement, CNRI hereby grants Licensee a nonexclusive, royalty-free, world-wide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python 1.6.1 alone or in any derivative version, provided, however, that CNRI's License Agreement and CNRI's notice of copyright, i.e., "Copyright (c) 1995-2001 Corporation for National Research Initiatives; All Rights Reserved" are retained in Python 1.6.1 alone or in any derivative version prepared by Licensee. Alternately, in lieu of CNRI's License Agreement, Licensee may substitute the following text (omitting the quotes): "Python 1.6.1

is made available subject to the terms and conditions in CNRI's License Agreement. This Agreement together with Python 1.6.1 may be located on the Internet using the following unique, persistent identifier (known as a handle): 1895.22/1013. This Agreement may also be obtained from a proxy server on the Internet using the following URL: <http://hdl.handle.net/1895.22/1013>".

3. In the event Licensee prepares a derivative work that is based on or incorporates Python 1.6.1 or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python 1.6.1.
4. CNRI is making Python 1.6.1 available to Licensee on an "AS IS" basis. CNRI MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, CNRI MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON 1.6.1 WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
5. CNRI SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON 1.6.1 FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON 1.6.1, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.
6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.
7. This License Agreement shall be governed by the federal intellectual property law of the United States, including without limitation the federal copyright law, and, to the extent such U.S. federal law does not apply, by the law of the Commonwealth of Virginia, excluding Virginia's conflict of law provisions. Notwithstanding the foregoing, with regard to derivative works based on Python 1.6.1 that incorporate non-separable material that was previously distributed under the GNU General Public License (GPL), the law of the Commonwealth of Virginia shall govern this License Agreement only as to issues arising under or with respect to Paragraphs 4, 5, and 7 of this License Agreement. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between CNRI and Licensee. This License Agreement does not grant permission to use CNRI trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.
8. By clicking on the "ACCEPT" button where indicated, or by copying, installing or otherwise using Python 1.6.1, Licensee agrees to be bound by the terms and conditions of this License Agreement.

ACCEPT

CWI LICENSE AGREEMENT FOR PYTHON 0.9.0 THROUGH 1.2

-----  
Copyright (c) 1991 - 1995, Stichting Mathematisch Centrum Amsterdam, The Netherlands. All rights reserved.

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 Stichting Mathematisch Centrum or CWI not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission.



STICHTING MATHEMATISCH CENTRUM DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL STICHTING MATHEMATISCH CENTRUM 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.

## A.38 Sys::SigAction 0.21 License

A copy of the Standard Version of Perl modules in this product is available at <https://www.oracle.com/downloads/opensource.html> or by following the directions on that page.

Copyright (c) 2004-2013 Lincoln A. Baxter

All rights reserved.

You may distribute under the terms of either the GNU General Public License or the Artistic License, as specified in the Perl README file

-----  
-----

Perl is free software; you can redistribute it and/or modify it under the terms of either:

a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or

b) the "Artistic License"

-----

a) the GNU General Public License

GNU GENERAL PUBLIC LICENSE

Version 1, February 1989

Copyright (C) 1989 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 license agreements of most software companies try to keep users at the mercy of those companies. By contrast, our 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. The General Public License applies to the Free Software Foundation's software and to any other program whose authors commit to using it. You can use it for your programs, too.

When we speak of free software, we are referring to freedom, not price. Specifically, the General Public License is designed to make sure that you have the freedom to give away or sell copies of free software, 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 a 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 tell them 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.

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 Agreement 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 work containing the Program or a portion of it, either verbatim or with modifications. Each licensee is addressed as "you".

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 General Public License and to the absence of any warranty; and give any other recipients of the Program a copy of this General Public License along with the Program. You may charge a fee for the physical act of transferring a copy.

2. You may modify your copy or copies of the Program or any portion of it, and copy and distribute such modifications under the terms of Paragraph 1 above, provided that you also do the following:

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

b) cause the whole of any work that you distribute or publish, that in whole or in part contains the Program or any part thereof, either with or without modifications, to be licensed at no charge to all third parties under the terms of this General Public License (except that you may choose to grant warranty protection to some or all third parties, at your option).

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the simplest and most usual 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 General Public License.

d) 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.

Mere aggregation of another independent work with the Program (or its derivative) on a volume of a storage or distribution medium does not bring the other work under the scope of these terms.

3. You may copy and distribute the Program (or a portion or derivative of it, under Paragraph 2) in object code or executable form under the terms of Paragraphs 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 Paragraphs 1 and 2 above; or,
- b) accompany it with a written offer, valid for at least three years, to give any third party free (except for a nominal charge for the cost of distribution) a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Paragraphs 1 and 2 above; or,
- c) accompany it with the information you received as to where the corresponding source code may be obtained. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form alone.)

Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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

5. By copying, distributing or modifying 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.

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.

7. 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 the 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 the license, you may choose any version ever published by the Free Software Foundation.

8. 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

9. 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.

10. 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

### Appendix: 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 humanity, 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) 19yy <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 1, 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) 19xx 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 a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

That's all there is to it!

-----

b) the "Artistic License"

#### DESCRIPTION

This is "The Artistic License". It's here so that modules, programs, etc., that want to declare this as their distribution license, can link to it.

It is also one of the two licenses Perl allows itself to be redistributed and/or modified; for the other one, the GNU General Public License, see the perlglp.

For a copy of the license, see [Artistic License](#).

## A.39 The Apache Software License, Version 1.1

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 the Apache Software Foundation (<http://www.apache.org/>)."

Alternately, this acknowledgment may appear in the software itself, if and wherever such third-party acknowledgments normally appear.

4. The names identified above with the specific software must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [apache@apache.org](mailto:apache@apache.org).
5. Products derived from this software may not be called "Apache", nor may "Apache" appear in their name, without prior written permission of the Apache Group.

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 APACHE SOFTWARE FOUNDATION 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.

## A.40 The Apache Software License, Version 2.0

The following applies to all products licensed under the Apache 2.0 License:

You may not use the identified files except in compliance with the Apache License, Version 2.0 (the "License.")

You may obtain a copy of the License at <http://www.apache.org/licenses/LICENSE-2.0>. A copy of the license is also reproduced below.

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 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.

## A.41 XMLBeans 2.6.4 License

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

=====

### ADDITIONAL LICENSES COVERING PARTS OF THIS DISTRIBUTION:

This distribution includes W3C XML Schema documents Copyright (c) 2001-2003 World Wide Web Consortium. These schemas are licensed under the W3C Software License, which is included in the same directory as the schemas.

The license can also be found at:

<http://www.w3.org/Consortium/Legal/2002/copyright-software-20021231>.

### License

By obtaining 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 work, 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 work or portions thereof, including modifications:

The full text of this NOTICE in a location viewable to users of the redistributed or derivative work. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, the W3C Software and Document Short Notice should be included.

Notice of any changes or modifications, through a copyright statement on the new code or document such as "This software or document includes material copied from or derived from [title and URI of the W3C document]. Copyright © [YEAR] W3C® (MIT, ERCIM, Keio, Beihang)."

### Disclaimers

THIS WORK 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 DOCUMENT 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 DOCUMENT.

The name and trademarks of copyright holders may NOT be used in advertising or publicity pertaining to the work without specific, written prior permission. Title to copyright in this work will at all times remain with copyright holders.

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) 2000-2003, BEA Systems, <<http://www.bea.com/>>.

Aside from contributions to the Apache XMLBeans project, this software also includes:

- one or more source files from the Apache Xerces-J and Apache Axis products, Copyright (c) 1999-2003 Apache Software Foundation
- W3C XML Schema documents Copyright 2001-2003 (c) World Wide Web Consortium (Massachusetts Institute of Technology, European Research Consortium for Informatics and Mathematics, Keio University)
- resolver.jar from Apache Xml Commons project, Copyright (c) 2001-2003 Apache Software Foundation

## A.42 XML::Simple 2.25 License

Copyright 1999-2004 Grant McLean <[grantm@cpan.org](mailto:grantm@cpan.org)>

This library is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

-----

Perl is free software; you can redistribute it and/or modify it under the terms of either:

- a) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version, or
- b) the "Artistic License"

Oracle elected to receive the code under the Artistic License.

-----

- b) the "Artistic License"

For a copy of the license, see [Artistic License](#).

- - - - -

=====

This code may require the following fourth party dependencies:

XML::Simple requires either XML::Parser or XML::SAX.

To generate documents with namespaces, XML::NamespaceSupport is required.

The optional caching functions require Storable.

- - - - -

XML::Parser is already a part of perl core. It does not have copyright information listed in its homepage.

License is same as Perl license mentioned above.

### AUTHORS

Larry Wall <[larry@wall.org](mailto:larry@wall.org)> wrote version 1.0.

Clark Cooper <[coopercc@netheaven.com](mailto:coopercc@netheaven.com)> picked up support, changed the API for this version (2.x), provided documentation, and added some standard package features.

Matt Sergeant <matt@sergeant.org> is now maintaining XML::Parser

-----

XML::SAX , copyright information is not listed in their homepage

AUTHOR

Current maintainer: Grant McLean, grantm@cpan.org

Originally written by:

Matt Sergeant, matt@sergeant.org

Kip Hampton, khampton@totalcinema.com

Robin Berjon, robin@knowscape.com

LICENSE: This is free software, you may use it and distribute it under the same terms as Perl itself (Mentioned above)

-----

XML::NamespaceSupport

COPYRIGHT AND LICENSE

This software is copyright (c) 2015 by Robin Berjon.

This is free software; you can redistribute it and/or modify it under the same terms as the Perl 5 programming language system itself. (mentioned above)

AUTHORS

Robin Berjon <robin@knowscape.com>

Chris Prather <chris@prather.org>

-----

Storable, copyright information is not listed in their homepage

License: is same as Perl license mentioned above.

Author:

Storable was written by Raphael Manfredi <Raphael\_Manfredi@pobox.com> Maintenance is now done by cperl <http://perl11.org/cperl>

-----

## A.43 Xerces2 Java 2.12.0 License

This product is licensed under the Apache 2.0 license. See "[The Apache Software License\\_ Version 2.0](#)".

```
=====
== 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 1999-2010 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 XML Commons Resolver

Copyright 2006 The Apache Software Foundation.

This product includes software developed at

The Apache Software Foundation <http://www.apache.org/>

Portions of this code are derived from classes placed in the public domain by Arbortext on 10 Apr 2000. See: [http://www.arbortext.com/customer\\_support/updates\\_and\\_technical\\_notes/catalogs/docs/README.htm](http://www.arbortext.com/customer_support/updates_and_technical_notes/catalogs/docs/README.htm)

=====

#### SAX LICENSE

This license applies to all interfaces and classes in the org/xml/sax hierarchy.

This module, both source code and documentation, is in the Public Domain, and comes with NO WARRANTY.

See <http://www.saxproject.org> for further information.

=====

#### W3C SOFTWARE NOTICE AND LICENSE

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.

Note: The original version of the W3C Software Copyright Notice and License could be found at <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:

The full text of this NOTICE in a location viewable to users of the redistributed or derivative work.

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.

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.

## A.44 httpmime 4.5.7 License

Apache HttpComponents Client

Copyright 1999-2017 The Apache Software Foundation

This product includes software developed at

The Apache Software Foundation (<http://www.apache.org/>).

From the license file

This product is licensed under the Apache 2.0 license. See [The Apache Software License, Version 2.0](#).

Fourth Part dependencies

=====

org.apache.httpcomponents:httpclient:4.5.5 (Apache 2.0)

org.apache.httpcomponents:httpcore:4.4.9 (Apache 2.0)

commons-codec:commons-codec:1.10 (Apache 2.0)

commons-logging:commons:logging:1.2 (Apache 2.0)

org.apache.commons:commons-lang3:3.4 (Apache 2.0)

junit:junit:4.12 (Test) (EPL 1.0)

org.mockito:mockito-core:1.10.19 (Test)(MIT)

org.hamcrest:hamcrest-core:1.1 (Test)(BSD 2-Clause)

org.objenesis:objenesis:2.1 (Test) (Apache 2.0)

-----  
Eclipse Public License - v 1.0

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

## 1. DEFINITIONS

"Contribution" means:

- a. in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and
- b. in the case of each subsequent Contributor:
  - i. changes to the Program, and
  - ii. additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents" mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

## 2. GRANT OF RIGHTS

- a. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.
- b. Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.
- c. Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient

hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

- d. Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

### 3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

- a. it complies with the terms and conditions of this Agreement; and
- b. its license agreement:
  - i. effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;
  - ii. effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
  - iii. states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and
  - iv. states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

- a. it must be made available under this Agreement; and
- b. a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

### 4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial

Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

#### 5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM 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. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

#### 6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), 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 OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### 7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In



addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

-----

#### MIT License

Copyright <YEAR> <COPYRIGHT HOLDER>

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 2-Clause BSD License

SPDX short identifier: BSD-2-Clause

Further resources on the 2-clause BSD license

Note: This license has also been called the "Simplified BSD License" and the "FreeBSD License". See also the 3-clause BSD License.

Copyright <YEAR> <COPYRIGHT HOLDER>

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.

-----

## A.45 zip 3.0 License

Copyright (c) 1990-2007 Info-ZIP. All rights reserved.

For the purposes of this copyright and license, "Info-ZIP" is defined as the following set of individuals:

Mark Adler, John Bush, Karl Davis, Harald Denker, Jean-Michel Dubois, Jean-loup Gailly, Hunter Goatley, Ed Gordon, Ian Gorman, Chris Herborth, Dirk Haase, Greg Hartwig, Robert Heath, Jonathan Hudson, Paul Kienitz, David Kirschbaum, Johnny Lee, Onno van der Linden, Igor Mandrichenko, Steve P. Miller, Sergio Monesi, Keith Owens, George Petrov, Greg Roelofs, Kai Uwe Rommel, Steve Salisbury, Dave Smith, Steven M. Schweda, Christian Spieler, Cosmin Truta, Antoine Verheijen, Paul von Behren, Rich Wales, Mike White.

This software is provided "as is," without warranty of any kind, express or implied. In no event shall Info-ZIP or its contributors be held liable for any direct, indirect, incidental, special or consequential damages arising out of the use of or inability to use 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 above disclaimer and the following restrictions:

1. Redistributions of source code (in whole or in part) must retain the above copyright notice, definition, disclaimer, and this list of conditions.
2. Redistributions in binary form (compiled executables and libraries) must reproduce the above copyright notice, definition, disclaimer, and this list of conditions in documentation and/or other materials provided with the distribution. The sole exception to this condition is redistribution of a standard UnZipSFX binary (including SFXWiz) as part of a self-extracting archive; that is permitted without inclusion of this license, as long as the normal SFX banner has not been removed from the binary or disabled.
3. Altered versions--including, but not limited to, ports to new operating systems, existing ports with new graphical interfaces, versions with modified or added functionality, and dynamic, shared, or static library versions not from Info-ZIP--must be plainly marked as such and must not be misrepresented as being the original source or, if binaries, compiled from the original source. Such altered versions also must not be misrepresented as being Info-ZIP releases--including, but not limited to, labeling of the altered versions with the names "Info-ZIP" (or any variation thereof, including, but not limited to, different capitalizations), "Pocket UnZip," "WiZ" or "MacZip" without the explicit permission of Info-ZIP. Such altered versions are further prohibited from misrepresentative use of the Zip-Bugs or Info-ZIP e-mail addresses or the Info-ZIP URL(s), such as to imply Info-ZIP will provide support for the altered versions.
4. Info-ZIP retains the right to use the names "Info-ZIP," "Zip," "UnZip," "UnZipSFX," "WiZ," "Pocket UnZip," "Pocket Zip," and "MacZip" for its own source and binary releases.

# Index

## Symbols

---

.NET Stored Procedures, [1-5](#)

## A

---

Active Data Guard

See Oracle Active Data Guard

Active Directory, [1-15](#)

adaptive execution plans, [1-12](#)

Advanced Analytics

See Oracle Advanced Analytics

Advanced Compression

See Oracle Advanced Compression

advanced index compression, [1-16](#)

Advanced Security

See Oracle Advanced Security

Application Continuity, [1-5](#)

Application Express

See Oracle Application Express

AQ sharded queues, [1-7](#), [1-49](#)

attribute clustering, [1-14](#)

Authorized Cloud Environments, [1-1](#)

feature availability, [1-3](#)

automatic block repair, [1-6](#), [1-18](#)

automatic correction of non-logged blocks, [1-6](#)

automatic data optimization, [1-17](#)

Automatic In-Memory, [1-12](#)

automatic index creation, [1-11](#)

Automatic SQL Plan Management, [1-10](#)

Automatic Workload Management, [1-14](#)

## B

---

backup and recovery, [1-6](#), [1-7](#)

backup, fast incremental, [1-6](#), [1-18](#)

BaseDB EE

See Oracle Base Database Service Enterprise Edition

BaseDB EE-EP

See Oracle Base Database Service Enterprise Edition - Extreme Performance

BaseDB EE-HP

See Oracle Base Database Service Enterprise Edition - High Performance

BaseDB SE

See Oracle Base Database Service Standard Edition

basic table compression, [1-17](#)

bitmap plan conversion, [1-17](#)

bitmapped index, [1-17](#)

block compression, [1-6](#)

block repair, [1-6](#)

block-level media recovery, [1-6](#)

## C

---

CDB Fleet Management, [1-4](#)

Centrally Managed Users, [1-15](#)

client side query cache, [1-11](#)

Cloud Management Pack

See Oracle Cloud Management Pack

column encryption, [1-14](#)

concurrent execution of UNION branches, [1-12](#)

Connection Manager

See Oracle Connection Manager

## D

---

Data Guard

See Oracle Data Guard

Data Guard Far Sync, [1-6](#), [1-46](#)

Data Masking and Subsetting Pack

See Oracle Data Masking and Subsetting Pack

Data Pump, [1-17](#)

database gateways, [1-7](#)

Database In-Memory

See Oracle Database In-Memory

database in-memory base level, [1-13](#)

Database Migration Planner, [1-22](#)

Database Migration Workbench, [1-22](#)

database options, [1-17](#)

checking for usage, [1-45](#)

Oracle Active Data Guard, [1-6](#), [1-18](#)

Oracle Advanced Compression, [1-16](#), [1-19](#)

Oracle Advanced Security, [1-14](#), [1-19](#), [1-46](#)

Oracle Database In-Memory, [1-12](#), [1-19](#)

Oracle Database Vault, [1-14](#), [1-20](#), [1-46](#), [1-49](#)

Oracle Label Security, [1-14](#), [1-20](#)

Oracle Multitenant, [1-4](#), [1-20](#)

Oracle On-Line Analytical Processing, [1-21](#)

database options (*continued*)

- Oracle On-Line Analytical Processing (OLAP), [1-16](#)
- Oracle Partitioning, [1-16](#), [1-21](#)
- Oracle RAC One Node, [1-5](#), [1-21](#)
- Oracle Real Application Clusters, [1-21](#)
- Oracle Real Application Clusters (Oracle RAC), [1-1](#), [1-14](#), [1-46](#)
- Oracle Real Application Testing, [1-8](#), [1-22](#), [1-46](#)
- Oracle TimesTen Application-Tier Database Cache, [1-12](#), [1-23](#)

Database Replay, [1-22](#), [1-46](#)

Database Resource Manager, [1-8](#)

Database Smart Flash Cache, [1-12](#)

Database Vault

- See Oracle Database Vault

deferred segment creation, [1-17](#)

Diagnostics Pack

- See Oracle Diagnostics Pack

duplexed backup sets, [1-6](#)

## E

---

editions, [1-1](#)

EE

- See Oracle Database Enterprise Edition

EE-ES

- See Oracle Database Enterprise Edition on Engineered Systems

encryption

- column, [1-14](#)
- tablespace, [1-14](#)

Enterprise Edition

- See Oracle Database Enterprise Edition

Enterprise Edition High Availability, [1-5](#)

Enterprise Package

- See Oracle Base Database Service Enterprise Edition

Enterprise User Security, [1-14](#), [1-46](#), [1-49](#)

Exadata

- See Oracle Exadata

ExaDB

- See Oracle Exadata Database Service on Dedicated Infrastructure and Oracle Exadata Database Service on Cloud@Customer

Extreme Performance Package

- See Oracle Base Database Service Enterprise Edition - Extreme Performance

## F

---

Fail Safe

- See Oracle Fail Safe

far sync, [1-6](#), [1-46](#)

fast incremental backup, [1-6](#), [1-18](#)

fast-start fault recovery, [1-7](#)

Fault Tolerant In-Memory Column Store, [1-12](#)

feature availability, [1-3](#)

fine-grained auditing, [1-15](#)

flash cache, [1-12](#)

flashback

- database, [1-7](#)
- table, [1-7](#)
- transaction, [1-7](#)
- transaction query, [1-7](#)

Flashback Data Archive, [1-7](#)

Flashback Time Travel, [1-7](#)

Fleet Patching and Provisioning, [1-11](#)

## G

---

Gateway for ODBC

- See Oracle Database Gateway for ODBC

Global Data Services, [1-7](#), [1-46](#), [1-49](#)

## H

---

heat map, [1-16](#)

High Performance Package

- See Oracle Base Database Service Enterprise Edition - High Performance

high-frequency statistics collection, [1-11](#)

HTTP Server

- See Oracle HTTP Server

hybrid columnar compression, [1-16](#)

- row-level locking, [1-16](#)

## I

---

I/O Resource Management, [1-8](#)

In-Memory

- See Oracle Database In-Memory

In-Memory Aggregation, [1-13](#)

in-memory base level, [1-13](#)

In-Memory Column Cache on Storage Servers, [1-12](#)

In-Memory Column Store, [1-12](#)

- fault tolerant, [1-12](#)

In-Memory Column Store support for External Tables, [1-13](#)

In-memory Parallel Execution, [1-17](#)

index rebuild, [1-6](#)

infrastructure repository databases, [1-46](#)

Instance Caging, [1-8](#)

Internet Directory

- See Oracle Internet Directory (OID)

## K

---

key compression

- See prefix compression

Keystore for Each Pluggable Database, [1-15](#)

## L

---

### Label Security

See Oracle Label Security

### Lifecycle Management Pack

See Oracle Database Lifecycle Management Pack for Oracle Database

Load Testing Accelerator, [1-51](#)

lost write protection, [1-6](#)

## M

---

### Machine Learning

See Oracle Machine Learning

management packs, [1-23](#)

checking for usage, [1-45](#)

Oracle Cloud Management Pack, [1-8](#), [1-24](#)

Oracle Data Masking and Subsetting Pack, [1-8](#), [1-27](#)

Oracle Database Lifecycle Management Pack for Oracle Database, [1-8](#), [1-29](#)

Oracle Diagnostics Pack, [1-8](#), [1-41](#)

Oracle Tuning Pack, [1-8](#), [1-41](#), [1-44](#)

materialized view query rewrite, [1-17](#)

media recovery, [1-6](#)

Memoptimized Rowstore, [1-13](#)

messaging gateway, [1-7](#)

Microsoft Active Directory, [1-15](#)

Microsoft Distributed Transaction Coordinator, [1-5](#)

### Multitenant

See Oracle Multitenant

## N

---

Native .NET Data Provider, [1-5](#)

network compression, [1-11](#)

### NoSQL

See Oracle NoSQL Database

## O

---

### OC4J

See Oracle Application Server Containers for J2EE (OC4J)

offerings, [1-1](#)

### OID

See Oracle Internet Directory (OID)

### OLAP

See Oracle On-Line Analytical Processing (OLAP)

### OLTP

See Oracle On-Line Analytical Processing

online datafile move, [1-7](#)

online index rebuild, [1-6](#)

online table organization, [1-6](#)

online table redefinition, [1-6](#)

### options

See database options

options\_packs\_usage\_statistics.sql, [1-45](#)

Oracle Active Data Guard, [1-6](#), [1-18](#)

rolling upgrades, [1-6](#)

Oracle Advanced Analytics, [1-16](#)

Oracle Advanced Compression, [1-16](#), [1-19](#), [1-49](#)

Oracle Advanced Security, [1-14](#), [1-19](#), [1-46](#), [1-49](#)

Oracle Application Express, [1-50](#)

Oracle Application Server Containers for J2EE (OC4J), [1-49](#)

Oracle Applications Unlimited, [1-49](#)

Oracle Automatic Storage Management (Oracle ASM), [1-46](#)

Oracle Automatic Storage Management Cluster File System (Oracle ACFS), [1-46](#)

Oracle Base Database Service Enterprise Edition, [1-1](#)

feature availability, [1-3](#)

options, [1-17](#)

Oracle Base Database Service Enterprise Edition - Extreme Performance, [1-1](#)

feature availability, [1-3](#)

management packs, [1-23](#)

options, [1-17](#)

Oracle Base Database Service Enterprise Edition - High Performance, [1-1](#)

feature availability, [1-3](#)

management packs, [1-23](#)

options, [1-17](#)

Oracle Base Database Service Standard Edition, [1-1](#)

feature availability, [1-3](#)

options, [1-17](#)

Oracle Big Data SQL, [1-49](#)

Oracle Cloud Management Pack, [1-8](#), [1-24](#)

Oracle Clusterware, [1-46](#)

Oracle Connection Manager, [1-11](#), [1-46](#)

Oracle Data Guard, [1-6](#)

Oracle Data Masking and Subsetting Pack, [1-8](#), [1-27](#)

Oracle Database Backup Cloud Service, [1-46](#)

Oracle Database Enterprise Edition, [1-1](#)

feature availability, [1-3](#)

management packs, [1-23](#)

options, [1-17](#)

Oracle Database Enterprise Edition on Engineered Systems, [1-1](#)

feature availability, [1-3](#)

management packs, [1-23](#)

options, [1-17](#)

Oracle Database Enterprise Edition on Oracle Database Appliance

feature availability, [1-3](#)

management packs, [1-23](#)

options, [1-17](#)

Oracle Database Enterprise Edition on Oracle Exadata Database Machine  
 feature availability, [1-3](#)  
 management packs, [1-23](#)  
 options, [1-17](#)

Oracle Database Gateway for ODBC, [1-46](#)

Oracle Database In-Memory, [1-12](#), [1-19](#)

Oracle Database Lifecycle Management Pack for Oracle Database, [1-8](#), [1-29](#)

Oracle Database Mobile Server, [1-49](#)

Oracle Database Personal Edition, [1-1](#)  
 feature availability, [1-1](#)  
 options, [1-17](#)

Oracle Database Provider for DRDA, [1-46](#)

Oracle Database Real Application Security, [1-15](#)

Oracle Database Standard Edition 2, [1-1](#)  
 feature availability, [1-3](#)  
 options, [1-17](#)  
 special-use licensing with Oracle Real Application Clusters, [1-46](#)

Oracle Database Vault, [1-14](#), [1-20](#), [1-46](#), [1-49](#)

Oracle Developer Tools for Visual Studio, [1-5](#)

Oracle Diagnostics Pack, [1-8](#), [1-41](#)

Oracle Exadata, [1-12](#)

Oracle Exadata Database Service on Cloud@Customer, [1-1](#)  
 feature availability, [1-3](#)  
 management packs, [1-23](#)  
 options, [1-17](#)

Oracle Exadata Database Service on Dedicated Infrastructure, [1-1](#)  
 feature availability, [1-3](#)  
 management packs, [1-23](#)  
 options, [1-17](#)

Oracle Exadata Flash Cache Compression, [1-16](#)

Oracle Fail Safe, [1-5](#)

Oracle Fleet Patching and Provisioning, [1-11](#)

Oracle GoldenGate, [1-46](#)

Oracle HTTP Server, [1-49](#)

Oracle Internet Directory (OID), [1-46](#), [1-49](#)

Oracle Label Security, [1-14](#), [1-20](#), [1-46](#), [1-49](#)

Oracle Load Testing, [1-51](#)

Oracle Load Testing Controller, [1-51](#)

Oracle Machine Learning, [1-16](#)

Oracle Multitenant, [1-4](#), [1-20](#), [1-49](#)

Oracle NoSQL Database, [1-14](#)

Oracle On-Line Analytical Processing, [1-21](#)

Oracle On-Line Analytical Processing (OLAP), [1-16](#)

Oracle Partitioning, [1-16](#), [1-21](#)

Oracle Programmer, [1-5](#), [1-49](#)

Oracle R Enterprise, [1-16](#)

Oracle RAC  
 See Oracle Real Application Clusters

Oracle RAC One Node, [1-5](#), [1-21](#)

Oracle Real Application Clusters, [1-21](#)

Oracle Real Application Clusters (Oracle RAC), [1-1](#), [1-14](#), [1-46](#)

Oracle Real Application Testing, [1-8](#), [1-22](#), [1-46](#), [1-49](#)

Oracle Secure Backup, [1-46](#), [1-49](#)

Oracle Secure Backup Cloud Module, [1-46](#), [1-49](#)

Oracle Secure Backup Express, [1-46](#), [1-49](#)

Oracle Sharding, [1-5](#), [1-49](#)

Oracle Spatial and Graph, [1-15](#)

Oracle TimesTen Application-Tier Database Cache, [1-12](#), [1-23](#)

Oracle Tuning Pack, [1-8](#), [1-41](#), [1-44](#)

Oracle Unified Directory (OUD), [1-49](#)

Oracle Wallet, [1-46](#)

## P

packages, [1-1](#)

parallel  
 backup and recovery, [1-6](#)  
 capture and apply, [1-17](#)  
 index build/scans, [1-17](#)  
 query/DML, [1-17](#)  
 spatial index builds, [1-16](#)  
 statement queuing, [1-17](#)  
 statistics gathering, [1-17](#)

Parallel Data Pump Export/Import, [1-17](#)

partitioned spatial indexes, [1-16](#)

partitioning  
 See Oracle Partitioning

Partitioning  
 See Oracle Partitioning

PDB Snapshot Carousel, [1-4](#)

Personal Edition  
 See Oracle Database Personal Edition

physical standby, [1-18](#)

PL/SQL function result cache, [1-11](#)

pluggable databases, [1-4](#)

point-in-time recovery, [1-6](#)

prefix compression, [1-16](#)

privilege analysis, [1-15](#)

Provider for DRDA  
 See Oracle Database Provider for DRDA

## Q

Quality of Service Management, [1-14](#)

query cache, [1-11](#)

query results cache, [1-11](#)

## R

R  
 See Oracle R Enterprise

RAC  
 See Oracle Real Application Clusters

RAC One Node  
     See Oracle RAC One Node  
 rapid home provisioning, [1-11](#)  
 RDMA fabric, [1-11](#)  
 Real Application Clusters  
     See Oracle Real Application Clusters (Oracle RAC)  
 Real Application Security  
     See Oracle Database Real Application Security  
 Real Application Testing  
     See Oracle Real Application Testing  
 real-time cascading standby, [1-6](#)  
 real-time statistics, [1-11](#)  
 Recovery Manager (RMAN), [1-49](#)  
 recovery,  
     block-level media, [1-6](#)  
     fast-start fault, [1-7](#)  
     parallel backup and, [1-6](#)  
     point-in-time, [1-6](#)  
     trial, [1-7](#)  
 redaction, [1-15](#)  
 redo apply, [1-6](#)  
 refreshable PDB switchover, [1-4](#)  
 restricted use licensing, [1-49](#)  
 RMAN backups, [1-7](#)  
 rolling upgrades, [1-6](#)  
 row-level locking, [1-16](#)

## S

---

SE2  
     See Oracle Database Standard Edition 2  
 semantic technologies, [1-16](#)  
 Shard Director, [1-46](#)  
 sharded queues, [1-7](#), [1-49](#)  
 smart flash cache, [1-12](#)  
 snapshot standby, [1-6](#)  
 snapshots, [1-15](#)  
 Spatial and Graph  
     See Oracle Spatial and Graph  
 special license rights, [1-46](#)  
 SQL apply, [1-6](#)  
 SQL Performance Analyzer, [1-22](#), [1-48](#)  
 SQL Plan Management, [1-9](#)  
 SQL quarantine, [1-11](#)  
 SQL Tuning Sets, [1-10](#)  
 SQLJ, [1-5](#)  
 Standard Edition 2  
     See Oracle Database Standard Edition 2  
 Standard Edition High Availability, [1-5](#)  
 Standard Package

    See Oracle Base Database Service Standard Edition  
 statistics collection, [1-11](#)

## T

---

table compression, [1-17](#)  
 tablespace encryption, [1-14](#)  
 tablespace point-in-time recovery, [1-6](#)  
 third-party licenses, [2-1](#), [2-29](#)  
 TimesTen  
     See Oracle TimesTen Application-Tier Database Cache  
 TimesTen Application-Tier Database Cache  
     See Oracle TimesTen Application-Tier Database Cache  
 Transaction Guard, [1-7](#)  
 transparent sensitive data protection, [1-15](#)  
 transportable tablespaces, [1-17](#)  
 trial recovery, [1-7](#)  
 Tuning Pack  
     See Oracle Tuning Pack

## U

---

Uncompressed Flashback Time Travel, [1-7](#)  
 Unified Audit, [1-49](#)  
 upgrades, rolling, [1-6](#)

## V

---

vault  
     See Oracle Database Vault  
 Virtual Private Database, [1-15](#)

## W

---

Wallet  
     See Oracle Wallet  
 workload management, [1-14](#)

## X

---

XStream, [1-17](#), [1-46](#)

## Z

---

zone maps, [1-14](#), [1-21](#)