# Oracle® Enterprise Manager Cloud Control

**Licensing Information User Manual** 





Oracle Enterprise Manager Cloud Control Licensing Information User Manual, 13c Release 5

F37171-21

Copyright © 2015, 2024, Oracle and/or its affiliates.

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

	rot	fa.	$\sim$
Г	re	ια	しせ

Audience	V
Documentation Accessibility	V
Related Resources	V
Conventions	vi
Introduction to Oracle Enterprise Manager Licensing	
License Authorization Requirement	1-1
Enabling and Disabling Management Packs in Oracle Enterprise Manager	1-1
Displaying Management Pack Information in Oracle Enterprise Manager	1-2
Additional Database and Fusion Middleware Information	1-3
Oracle Enterprise Manager Restricted-use License	1-3
Database and Engineered Systems Management	
Oracle Diagnostics Pack	2-1
Oracle Tuning Pack	2-6
Database Lifecycle Management Pack for Oracle Database	2-8
Oracle Data Masking and Subsetting Pack	2-27
Oracle Real Application Testing	2-29
Exadata Management Pack	2-31
Zero Data Loss Recovery Appliance Management Pack	2-33
Legacy: Configuration Management Pack for Oracle Database	2-35
Legacy: Change Management Pack for Oracle Database	2-43
Legacy: Provisioning and Patch Automation Pack for Oracle Database	2-46
Oracle Middleware Enterprise Management	
WebLogic Server Management Pack Enterprise Edition	3-1
SOA Management Pack Enterprise Edition	3-22
Management Pack for WebCenter	3-26
Management Pack for Oracle Coherence	3-30
Management Pack for Oracle Data Integrator	3-32



	Business Intelligence Management Pack	3-34
4	Cloud Management	
	Oracle Cloud Management Pack for Oracle Database	4-1
5	Identity Management Enterprise Management	
	Management Pack Plus for Identity Management	5-1
6	Other Infrastructure Management	
	Configuration Management Pack for Applications	6-1
	Management Pack for Non-Oracle Middleware	6-8
	System Monitoring Plug-ins for Non-Oracle Middleware	6-11
	System Monitoring Plug-ins for Non-Oracle Databases	6-16
	Oracle Enterprise Manager for MySQL	6-18
7	Packaged Application Management	
	Application Management Suite for Siebel	7-1
	Application Management Pack for Fusion Applications	7-12
	Application Management Suite for Fusion Applications	7-21
	Application Management Suite for Oracle E-Business Suite	7-22
	Application Management Suite for JD Edwards EnterpriseOne	7-33
	Application Management Suite for PeopleSoft Enterprise	7-42
8	End-User Monitoring	
	Oracle Real User Experience Insight	8-1
	Enterprise Manager Cloud Control Service Level Management	8-5
9	Oracle Cloud Infrastructure Integration	
	Ops Insights	9-1
10	Enterprise Manager Base Functionality	
	Base Framework Feature Summary	10-1
	Base Database Management Feature Summary	10-3
	Base Middleware Management Feature Summary	10-4
	Base Engineered Systems Management Feature Summary	10-5
	Exadata Management Features	10-5
		10 0



Exalogic Management Features	10-6
Private Cloud Appliance Management Features	10-6
Server, Storage, and Virtualization Management Feature Summary	10-6
Third-Party Licenses for Enterprise Manager Cloud Control	
Open Source or Other Separately Licensed Software Distributed in Enterprise Manager Cloud Control	A-2
Antlr - v 4.7.2	A-30
Apache Software Foundation Licenses, Version 2.0	A-34
Common Public License - v 1.0	A-38
Eclipse Distribution License - v 1.0	A-39
Eclipse Public License - v 1.0	A-39
Eclipse Public License - v 2.0	A-43
GNU General Public License - v 2.0	A-47
GNU Lesser General Public License version 2.1	A-52
Helidon License Information	A-60
ICU4J License Information	A-104
Info-ZIP UnZip License	A-106
Infozip Zip License	A-107
Insecure NMAP License, Version 7.90	A-108
JPython 1.1.x Software License	A-118
Jython 2.0, 2.1 License	A-125
Mozilla Public License Version 2.0	A-126
OpenSSL License	A-132
Original SSLeay License	A-133
The "Artistic License"	A-134
The Jython License	A-136
The Legion of the Bouncy Castle	A-137
The MIT License	A-137
The Perl License 5.32.0	A-138
Additional Licensing Information	A-160
Indov	
Index	



### **Preface**

This document, which is part of the Program Documentation under the terms of your Oracle licensing agreement, is intended to help you understand the features, functionality, and options available for Oracle Programs. If you have questions about licensing needs, contact your Oracle sales representative or refer to the resources listed in Related Resources for more information.

Oracle Enterprise Manager 13c is available in multiple editions, each suitable for different development and deployment scenarios. Oracle also offers several Enterprise Manager options that enhance the capabilities of Oracle Enterprise Manager for specific application requirements. Oracle Enterprise Manager Licensing Information provides information on these optional products.

This Preface contains the following topics:

- Audience
- Documentation Accessibility
- Related Resources
- Conventions

#### **Audience**

This book is intended for all purchasers of Oracle Enterprise Manager Cloud Control 13c.

### **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.

### **Related Resources**

For more information, see the following documents:

- Oracle Database Licensing Information
- Oracle Application Server Licensing Information
- Oracle Enterprise Manager Cloud Control Introduction

You can access these documents from the Oracle Help Center:



http://docs.oracle.com/en/

Additionally, the Oracle Software Investment Guide is available for downloading at:

http://www.oracle.com/us/corporate/pricing/software-investment-guide/index.html

### Conventions

The following text conventions are used in this document:

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



1

# Introduction to Oracle Enterprise Manager Licensing

Oracle Enterprise Manager Cloud Control 13c is Oracle's platform for monitoring and managing your entire enterprise: databases, engineered systems, software or hardware, middleware and applications, on-premises or in the cloud. It couples a potent, top-down monitoring approach to delivering the highest quality of service for applications with a cost-effective automated configuration management, provisioning, and administrative solution. This powerful combination provides unequaled management for any size Oracle data center. Oracle also offers several options, management packs, management plug-ins, and other products that enhance the capabilities of Oracle Enterprise Manager for specific purposes. This guide describes the separately licensed Oracle Enterprise Manager management packs, management plug-ins, and other products you can purchase to enhance the capabilities of Oracle Enterprise Manager in specific environments. This guide contains the following chapters and appendix:

- Database and Engineered Systems Management
- Oracle Middleware Enterprise Management
- Cloud Management
- Identity Management Enterprise Management
- Other Infrastructure Management
- Packaged Application Management
- End-User Monitoring
- Enterprise Manager Base Functionality
- Third-Party Licenses for Enterprise Manager Cloud Control

### License Authorization Requirement

You can use the options, management packs, reports, licensed repository views, or Command Line Interface (CLI) verbs described in these chapters **only** with the appropriate licenses. Although these options, management packs, or products may be included in product CDs or downloads, or described in documentation that you receive, this does not authorize you to use them without the appropriate licenses.

## Enabling and Disabling Management Packs in Oracle Enterprise Manager

To enable or disable the functionality for most packs in Oracle Enterprise Manager Cloud Control 13c:

- 1. Log in to Oracle Enterprise Manager as a super administrator.
- 2. From the **Setup** menu (in the upper-right corner of the page), select **Management Packs**, and then **Management Pack Access**.

The **Management Pack Access** page allows you to enable or disable access for each Management Pack on each listed target. Select **Licensable Targets** (default) or **All Targets** to view management pack access information. The **Pack Access** view options are:

Target Based - For each target listed, you can enable or disable the management
packs associated with the target. For the target listed in the Name column, select the
management packs for which you have access and click the box for that pack.

For a new target, click the box in the **Pack Access Agreed** column to agree to the terms of the licensing agreement. The Pack Access Agreed option is available for selection only for a newly added target for which you have not accepted the terms of the Licensing Agreement. By default, the **Pack Access Agreed** option is not selected.

Click Apply to save your changes.

Pack Based Batch Update - You can enable or disable management packs as a
group across all licensable targets or for a specific target type. Select the type from the
drop-down list. The Available Packs list will update based on your selection.

Select the pack you want to enable/disable. Hold the Control key to select multiple packs. Click **Move** and then either the **Enable** or **Disable** access options.

Click Apply to save your changes.

Default Settings - You do not have to manually enable or disable management packs
every time a new target is discovered. By using the Default Settings feature, you can
define for each target type what packs a new target will be entitled to upon discovery.

For example, if you add an additional database target, then all associated packs (such as, Oracle Database Lifecycle Management Pack, Database Tuning Pack) will be automatically assigned to the newly discovered database target. If you do not want these packs automatically enabled for new targets, you must disable **Default Settings** for the associated packs.

Select the pack you want to enable/disable. Hold the Control key to select multiple packs. Click **Move** and then either the **Enable** or **Disable** options. By default, **Default Settings** is enabled.

If you disable any pack, it will appear in the **Default Settings Disabled List**. Both the management pack name and the associated type will be included. Also, all targets of the associated target type discovered in the future will not get the pack by default.

Click **Apply** to save your changes.

When you disable a Management Pack, links that are part of that pack will either be disabled or, when a link is clicked, a message will indicate that the associated pack is not licensed for use. After performing the previous steps to disable a pack, any administrator who logs in to Oracle Enterprise Manager Cloud Control 13c cannot access any Management Pack functionality that you have disabled.

## Displaying Management Pack Information in Oracle Enterprise Manager

Oracle Enterprise Manager indicates licenses by displaying an abbreviation of the management pack. This feature is not enabled by default and to enable it:

- 1. Go to the Oracle Enterprise Manager home page.
- From the Setup menu (in the upper-right corner of the page), select Management Packs, and then Enable Annotations.



Once enabled, you can go to a target's home page, select the menus, and the management pack abbreviation is displayed next to the menu options that require a management pack. For example, if you enable annotations and go to the home page of a Database target and select the **Performance** menu, **DD** is displayed next to the **Performance** Home menu option. **DD** is the abbreviation of the Database Diagnostics Pack.

You can also select the **Setup** menu, then **Management Packs** and:

- Select Packs for this Page to view the Management Packs for this Page dialog box, which provides information regarding the license pack required for the page you are on.
- Select **License Information** to view the list of management packs and information such as the abbreviation, name, and a brief description of the pack.

### Additional Database and Fusion Middleware Information

For additional information about licensed products associated with either Oracle Database, Oracle Fusion Middleware, or Oracle WebLogic Server, see the corresponding licensing information available in the Oracle Help Center:

https://docs.oracle.com/en/

### Oracle Enterprise Manager Restricted-use License

Oracle Enterprise Manager includes a restricted-use license of the Oracle Database
 Enterprise Edition for use only with the Oracle Management Repository as well as with the
 following complementary repositories used by Oracle Enterprise Manager: Always-on
 Monitoring Repository, AWR Warehouse, Ops Center, Real User Experience Insight, Load
 Testing, and Test Manager.

Any use of Oracle Database options by Oracle Enterprise Manager's SYSMAN schema is included with the restricted-use license and does not require a separate license.

Additional database options or additional servers for disaster recovery require separate licensing. Customers receive one single-instance database with the Cloud Control, or RMAN, repository. To protect the repository with Data Guard, customers need to purchase a license for the standby site. To protect the repository with Oracle Real Application Clusters, customers must license the second node for the database, and both nodes require an Oracle Real Application Clusters license.

- Oracle Enterprise Manager includes a restricted-use license of the Oracle WebLogic Server for use with Oracle Enterprise Manager functions and interfaces only.
- A restricted-use license for WebLogic clustering is included to support the deployment of a cluster of Oracle Analytics Servers, only when used with Oracle Enterprise Manager.
- Oracle Enterprise Manager includes restricted use of Oracle Analytics Server and Oracle Analytics Server for mobile web for use with Oracle Enterprise Manager functions and interfaces only. This restricted Oracle Analytics Sever license will allow reporting only against the Oracle Enterprise Manager repository and against data dictionary (including AWR and AWR Warehousing data) of target databases. The restricted-use license covers the monitoring of the FMW domain of OAS through Oracle Enterprise Manager. In order to report against other data sources, it is necessary to have Oracle Analytics Server license.



#### Note:

Some Oracle Enterprise Manager management packs include Oracle Analytics Server reports that use a different data source. The license to use these reports is provided as part of the license for the relevant management pack. More details on these reports are provided in the relevant chapter of this document.

For more information, see Oracle Business Intelligence Publisher/Oracle Analytics Server Licensing with Oracle Enterprise Manager Cloud Control 13c.

 Restricted-use license of Oracle ZFS Storage Appliance Cloning (Part #7102338) is included with Oracle Enterprise Manager Snap Clone, a feature of Oracle Cloud Management Pack for Oracle Database.



### Database and Engineered Systems Management

This chapter describes the management packs offered by Enterprise Manager in support of Oracle Database and Engineered Systems. The following management packs are included:

- Oracle Diagnostics Pack
- Oracle Tuning Pack
- Database Lifecycle Management Pack for Oracle Database
- Oracle Data Masking and Subsetting Pack
- Oracle Real Application Testing
- Exadata Management Pack
- Zero Data Loss Recovery Appliance Management Pack
- Legacy: Configuration Management Pack for Oracle Database
- Legacy: Change Management Pack for Oracle Database
- Legacy: Provisioning and Patch Automation Pack for Oracle Database

These management packs can be purchased only with Enterprise Edition. The features in these packs are accessible through Oracle Enterprise Manager Cloud Control, Oracle Enterprise Manager Database Express, and APIs provided with Oracle Database software.

For information on the Oracle Databases certified for use with Oracle Enterprise Manager:

- 1. Sign in to My Oracle Support and click the Certifications tab.
- 2. In the Certification Search region:
  - Select Enterprise Manager Base Platform OMS from the Product list.
  - Select the release you are interested in from the Release list.
- 3. Click Search.

The certified databases and versions are displayed. For more information, go to the Oracle Database Documentation page and see the *Oracle Database Licensing Information User Manual* for the Oracle Database version you are interested in.

### **Oracle Diagnostics Pack**

The Oracle Diagnostics Pack provides automatic performance diagnostic and advanced system monitoring functionality. The following table describes this management pack offered by Enterprise Manager:

Management Pack	Type of Licensing Information	Licensing Information
Oracle Diagnostics Pack	Features	The Oracle Diagnostics Pack includes the following features:
<b>G</b>		-
Oracle Diagnostics Pack	Features	<ul> <li>Automatic Workload Repository (AWR) that captures statistics automatically, including snapshot data, active session history data, and workload reports.</li> <li>AWR Warehouse to seamlessly retain AWR data beyond the default retention period and perform historical performance analysis tasks using Active Session History (ASH) Analytics, AWR, and Compare Period Reports.</li> <li>AWR Warehouse Diagnosability is a part of AWR warehouse and it proactively identifies the points of failure after the AWR warehouse is configured and the ETL process has started running between the source database and warehouse, by running a number of tests on the AWR warehouse or selecting a set of sources and determining the health of the AWR warehouse configuration.</li> <li>Automatic Database Diagnostic Monitor (ADDM) for performance analysis based on AWR data.</li> <li>Real Time ADDM to allow analysis of transient performance issues and hung databases.</li> <li>ADDM Spotlight provides insights on workload tuning recommendations by analyzing ADDM data over an extended period of time. This enables administrators to confidently implement recommendations by identifying</li> </ul>
		<ul> <li>ones that have significant impact on database performance.</li> <li>Active Session History (ASH) providing an "Always-On" capture of database performance activity using one-second samples of the session state.</li> </ul>
		<ul> <li>ASH analytics provides insight to the database workload profile across various performance dimensions using ASH data.</li> </ul>
		<ul> <li>Performance Hub provides a single view of database performance with access to ADDM, SQL Tuning, Real- Time SQL Monitoring, and ASH Analytics under the same hood.</li> </ul>
		<ul> <li>Top Activity Lite is a simplified yet highly efficient mode of Performance Hub that supports real-time performance monitoring of database activity in a single view for easy visualization of issues.</li> </ul>
		<ul> <li>Replay Compare Period Report provides accurate performance analysis using the ASH infrastructure for capture/replay sessions.</li> </ul>
		Exadata Cell Grid Administration
		<ul> <li>Exadata Cell Grid Performance</li> </ul>
		Exadata Cell Group Health Overview Page
		Exadata Resource Utilization
		<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.  Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.  Metric Extensions to create new metrics to monitor conditions specific to customer environments.  Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.  Dynamic metric baselines and Adaptive metric thresholds  Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.  Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.  Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.  Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.  Bottleneck detection and Component top wait event analysis  Memory access mode to retrieve performance statistics directly from the Shared Global Area (SGA).  Automatic Workload Repository (AWR) Hub consolidates AWR snapshots from one or more Autonomous Databases and also provides the ability to generate AWR Reports for any database uploading snapshots to the
Oracle Diagnostics Pack	Feature Requirements	AWR Hub.  In order to use the features listed above, you must purchase licenses for Oracle Diagnostics Pack. The CONTROL_MANAGEMENT_PACK_ACCESS initialization parameter controls access to Oracle Diagnostics Pack and Oracle Tuning Pack. This parameter can be set to one of three values:
		<ul> <li>DIAGNOSTIC+TUNING: Oracle Diagnostics Pack and Oracle Tuning Pack functionality is enabled in the database server.</li> </ul>
		DIAGNOSTIC: Only Oracle Diagnostics Pack functionality is enabled in the database server.      November Oracle Diagnostics Pack and Oracle Timing Pack
		<ul> <li>NONE: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server.</li> </ul>
		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, require an Oracle Diagnostics Pack license.



Management Pack	Type of Licensing Information	Licensing Information	
Management Pack  Oracle Diagnostics Pack		Cracle Diagnostics Pack features can also be accessed by way of the following database server APIs and command-line interfaces:  DBMS_WORKLOAD_REPOSITORY This API is part of the Oracle Diagnostics Pack.  DBMS_ADDM This API is part of the Oracle Diagnostics Pack.  DBMS_ADVISOR This API package is part of the Oracle Diagnostics 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.  DBMS_WORKLOAD_REPLAY.COMPARE_PERIOD_REPORT This API function is part of the Oracle Diagnostics Pack.  V\$ACTIVE_SESSION_HISTORY This dynamic performance view and its underlying table, x\$ASH, are part of the Oracle Diagnostics Pack.  DBA_STREAMS_TP_PATH_BOTTLENECK This API is part of the Oracle Diagnostics Pack.  DBA_ADDM_ All views beginning with DBA_ADDM_ are part of the Oracle	
		All views beginning with DBA_ADDM_ are part of the Oracle Diagnostics Pack.  • DBA_STREAMS_TP_COMPONENT_STAT  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:  where STATISTIC_UNIT = 'PERCENT'	
		For example, the following query shows Diagnostics-Pack-dependent data only:  SELECT * FROM DBA_STREAMS_TP_COMPONENT_STAT  where STATISTIC_UNIT = 'PERCENT';	
		<ul> <li>DBA_HIST_ 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.         DBA_ADVISOR_         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> </ul>	

Management Pack	Type of Licensing Information	Licensing Information
Oracle Diagnostics Pack	Disabling Licensed Links	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.
		<ul> <li>From the Setup menu, select Management Packs &gt; Management Pack Access.</li> <li>On the Management Pack Access page, you can grant and remove access from all the management packs. By default, access is granted. To disable access click the</li> </ul>
		default, access is granted. To disable access, click the appropriate check box for the Diagnostics Pack and click <b>Apply</b> .
Oracle Diagnostics Pack	Licensed Reports	The following reports found in the /rdbms/admin/ directory of the Oracle home directory are part of the Oracle Diagnostics Pack:
		awrrpt.sql awrgpt.sql awrgrpt.sql awrgrpti.sql awrgdrpt.sql awrgdrpi.sql addmrpt.sql addmrpti.sql ashrpti.sql ashrpti.sql awrddrpt.sql awrddrpt.sql awrddrpt.sql awrddrpt.sql awrddrpi.sql awrddrpi.sql awrsqrpi.sql awrsqrpt.sql awrsqrpt.sql awrsqrpt.sql awrsqrpt.sql awrextr.sql awrextr.sql awrload.sql awrinfo.sql spawrrac.sql



Management Pack	Type of Licensing Information	Licensing Information
Oracle Diagnostics Pack	Licensed Repository Views	The following repository views are part of the Diagnostics Pack for Oracle Database:
		Monitoring Views
		MGMT\$ALERT_CURRENT MGMT\$ALERT_HISTORY MGMT\$ALERT_NOTIF_LOG MGMT\$AVAILABILITY_CURRENT MGMT\$AVAILABILITY_HISTORY MGMT\$BLACKOUT_HISTORY MGMT\$BLACKOUTS MGMT\$METRIC_COLLECTIONS MGMT\$METRIC_CURRENT MGMT\$METRIC_CURRENT MGMT\$METRIC_DAILY MGMT\$METRIC_DETAILS MGMT\$METRIC_HOURLY
		MGMT\$TARGET_METRIC_COLLECTIONS MGMT\$TARGET_METRIC_SETTINGS
		Template Views
		MGMT\$TEMPLATES MGMT\$TEMPLATE_METRIC_COLLECTION MGMT\$TEMPLATE_METRIC_SETTINGS MGMT\$TEMPLATE_POLICY_SETTINGS

### Oracle Tuning Pack

Oracle Tuning Pack provides database administrators with expert performance management for the Oracle environment, including SQL tuning and storage optimizations. The following table describes this management pack offered by Enterprise Manager:

Management Pack	Type of Licensing Information	Licensing Information
Oracle Tuning Pack	Prerequisites	The Oracle Tuning Pack requires the Oracle Diagnostics Pack.



Information	
Feature Summary	<ul> <li>In-Memory Advisor analyzes database workload and makes recommendations on which database objects to place in the Database In-Memory Store for optimal database performance.</li> </ul>
	<ul> <li>SQL Access Advisor recommends schema changes needed to improve database performance.</li> </ul>
	<ul> <li>SQL Tuning Advisor analyzes SQL statements and makes recommendations for better execution. Includes an automatic mode to run during system maintenance windows as a maintenance task.</li> </ul>
	<ul> <li>Automatic SQL Tuning selects high-load SQL queries in the system and generates recommendations on how to tune them. Executes during the system maintenance window.</li> </ul>
	<ul> <li>SQL Profiles enables transparent tuning of queries without requiring any application changes.</li> </ul>
	<ul> <li>Real-time Database Operations Monitoring provides live visual displays to track the progress of SQL and PL/SQL queries associated with a business operation.</li> </ul>
	<ul> <li>Real-time SQL and PL/SQL Monitoring monitors execution of long-running or parallel SQL statements in real-time.</li> </ul>
	<ul> <li>Reorganize objects reorganizes database space usage for objects or tablespaces to improve performance.</li> </ul>
	In order to use the features listed above, you must purchase licenses for Oracle Tuning Pack, with one exception:
	<ol> <li>Use of In-Memory Advisor for databases where Database In-Memory option has not yet been deployed does NOT require Oracle Tuning Pack license.</li> </ol>
Feature Summary	A new initialization parameter,
(Continued)	CONTROL_MANAGEMENT_PACK_ACCESS, 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:
	<ul> <li>DIAGNOSTIC+TUNING: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is enabled in the database server.</li> </ul>
	<ul> <li>DIAGNOSTIC: Only Oracle Diagnostics Pack functionality is enabled in the server.</li> </ul>
	NONE: Oracle Diagnostics Pack and Oracle Tuning Pack functionally is disabled in the database server.
	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, require an Oracle Tuning Pack license.



Management Pack	Type of Licensing Information	Licensing Information
Oracle Tuning Pack	Disabling Licensed Links	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.
		<ul> <li>From the Setup menu, select Management Packs &gt; Management Pack Access.</li> </ul>
		<ul> <li>On the Management Pack Access page, you can grant and remove access from all the management packs. By default, access is granted. To disable access, click the appropriate check box for the Tuning Pack and click Apply.</li> </ul>
Oracle Tuning Pack	Accessing Features through Command-Line APIs	Oracle Tuning Pack features can also be accessed by way of the following database server APIs and command-line interfaces:
		• DBMS_ADVISOR
		When the value of the advisor_name parameter is either SQL Tuning Advisor or SQL Access Advisor, this API package is part of the Oracle Tuning Pack.  DBMS SQLTUNE
		This API is part of the Oracle Tuning Pack.  • V\$SQL MONITOR
		This API is part of the Oracle Tuning Pack.  • V\$SQL_PLAN_MONITOR
		This API is part of the Oracle Tuning Pack.
Oracle Tuning Pack	Licensed Reports	The $sqltrpt.sql$ report in the $/rdbms/admin/$ directory of the Oracle home directory is part of this pack.

### Database Lifecycle Management Pack for Oracle Database

The Database Lifecycle Management Pack is a comprehensive solution that helps database, system, and application administrators automate the processes required to manage the Oracle Database Lifecycle. It eliminates manual and time consuming tasks related to discovery, initial provisioning, patching, configuration management and ongoing change management. In addition the Database Lifecycle Management pack provides compliance frameworks for reporting and management of industry and regulatory compliance standards.

The following table describes this management pack offered by Enterprise Manager:



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for	Database Lifecycle Types	The Database Lifecycle Management covers the entire lifecycle of the databases, including:
Oracle Database		<ul> <li>Compliance management: Secure target configurations and achieve compliance with industry and regulatory standards like Center for Internet Security (CIS), Security Technical Implementation Guide (STIG), Payment Card Industry Security Standards Council (PCI DSS), and Health Insurance Portability and Accountability Act (HIPAA).</li> <li>Configuration management: Deploy standardized configurations, reduce sprawl, monitor for vulnerabilities, remediate to comply and analyze configuration change history and search.</li> <li>Fleet Maintenance: End-to-end upgrade and patching solution</li> </ul>
		with the primary intent to apply recommended security patches to databases and associated grid infrastructure at scale. Supports patching databases in on-premises, Exadata Cloud, public clouds like Oracle Cloud Infrastructure, AWS, and so on.
		<ul> <li>Fleet Maintenance Hub: Administrator-centric solution to obtain insight into vulnerabilities for database assets and apply patches to affected targets. Using this feature, administrators can identify database assets that are not subscribed to a gold image, review patch recommendations for images, and once gold images are refreshed, subscribe targets to a newer version of gold images and perform update and upgrade operations.</li> </ul>
		<ul> <li>Fleet Provisioning and Patching: Integration with Oracle Fleet Patching and Provisioning (FPP), which enables FPP users to leverage Enterprise Manager capabilities such as security patch recommendations and proactive patching using Fleet Maintenance.</li> </ul>
		<ul> <li>Exadata Engineered System Compliance with AHF EXAchk:         Set of compliance standards and associated controls for         overall health monitoring, automated risk identifications and         proactive notification of issues for each Exadata System         component and database instances.</li> </ul>
		<ul> <li>Oracle Database Security Assessment Tool (DBSAT) Compliance Standards</li> </ul>
		<ul> <li>DBSAT compliance standard for fleet-level assessment of database configuration: Assess database security posture, including user privileges, and get recommendations for elevating security posture.</li> <li>DBSAT compliance standard for fleet-level discovery of sensitive data: Assess to identify the amount and location of sensitive data in a system, and analyze potential exposure to determine data protection requirements.</li> </ul>
		<ul> <li>Provisioning: Ability to provision single instance, RAC, and Multitenant databases.</li> </ul>
		<ul> <li>Cloning: Clone to create a copy of an existing single instance, RAC, and Multitenant database.</li> </ul>
		<ul> <li>Database Change Management: End-to-end management of schemas and data changes.</li> </ul>
		<ul> <li>Inventory tracking: Ability to track inventory utilization and growth over a period of time.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Prerequisites	The Database Lifecycle Management Pack is a prerequisite for the Oracle Cloud Management Pack for Oracle Database.



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	General Feature Summary	The Database Lifecycle Management Pack for Oracle Database includes the following features, which you can use after purchasing a license:
		<ul> <li>Provision all database target types: Single Instance Database Real Application Clusters (RAC), and Multitenant databases including Container Database (CDB) and Pluggable Database (PDB).</li> </ul>
		<ul> <li>Copy objects to copy database objects with data, with a subset of data, or without data.</li> </ul>
		<ul> <li>Database Patching: An end-to-end patch automation for Oracle Databases and RAC databases. A bulk deployment of patches on all configuration types of Oracle Database with minimal downtime.</li> </ul>
		<ul> <li>Upgrade existing Oracle Database and/or Oracle Grid Infrastructure across major release versions (for example, 196 to 21c versions).</li> </ul>
		Upgrade Standalone Databases, RAC (including Grid Infrastructure and RAC Database) and Dataguard Databases Dataguard Databases both Primary and Standby are upgraded in rolling method using Transient Logical Standby method.
		<b>Note:</b> The rolling upgrade using the Transient Logical Standby method requires a license for the Oracle Active Data Guard option. For more information, see Oracle Database Options and Their Permitted Features in <i>Oracle Database Licensing Information User Manual</i> .
		<ul> <li>Configuration management to monitor the drift of configuration properties of managed targets, customize templates for drift comparison, augment configuration properties to collect, track review change history and search.</li> </ul>
		<ul> <li>Compliance management to automate the hardening of secure configuration of managed targets, monitor for compliance with industry and regulatory standards like CIS, STIG, PCI DSS, HIPAA, and other out-of-the-box standards.</li> </ul>
		Compliance management of Exadata Engineered Systems:     Secure and monitor the health of each Exadata component based on Autonomous Health Framework EXAchk.
		<ul> <li>Hybrid Cloud Management for a single pane of glass view to monitor and manage both on-premises and Oracle Cloud (public cloud) deployments, all from the same management console.</li> </ul>
		<ul> <li>Enterprise Data Governance to automatically discover, scan, and identify databases of sensitive nature in the enterprise.</li> <li>Allows administrators to run deep scans in flagged databases for sensitive artifacts, pin-pointing its location within the database.</li> </ul>
		<ul> <li>Disaster Recovery through Site Guard to automate complete site failover of Oracle Database.</li> </ul>
		<ul> <li>File Synchronization of configuration file differences during a comparison.</li> </ul>
		<ul> <li>Notifications on configuration changes or differences.</li> <li>RAC Scale Back to delete or scale back a single instance database from RAC.</li> </ul>
		<ul> <li>RAC Scale Out to extend single instance databases to RAC.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Provisioning Features	<ul> <li>Software Library for preserving profiles, templates and software bits.</li> <li>Provision Oracle Databases, RAC databases, RAC One Node, and PDBs.</li> </ul>
		<ul> <li>Create Oracle Databases, RAC databases, and PDBs.</li> <li>Extend or scale up RAC databases.</li> <li>Delete or scale down RAC databases.</li> <li>Create Database Provisioning Profiles for automating mass deployment.</li> <li>Create standby databases.</li> </ul>
		<ul> <li>User Defined Deployment Procedures (UDDP) to automate custom processes by creating a procedure from scratch by inserting the required phases, steps, and variables.</li> <li>Ongoing provisioning of Exadata VMs.</li> </ul>
Database Lifecycle Management Pack for Oracle Database	Cloning Features	<ul> <li>Create a full clone database using:         <ul> <li>Clone Wizard</li> <li>EMCLI</li> <li>Classic Cloning Wizard, which enables you to clone databases using RMAN backup, staging areas, or an existing backup.</li> </ul> </li> <li>Refresh a cloned database.</li> <li>Create a full clone pluggable database using:         <ul> <li>Clone Wizard</li> <li>EMCLI</li> </ul> </li> </ul>
Database Lifecycle Management Pack for Oracle Database	Patching and Upgrade Features	Fleet Maintenance allows administrators to patch and upgrade database software with minimal downtime. The subscription-based model enables updates across your entire database estate, significantly reducing the time required for maintenance activities. Database fleet maintenance can be used for:  Single Instance Oracle Homes and associated databases RAC Oracle Homes and associated databases Grid Infrastructure Homes and associated Grid Instances Oracle Restart Homes and associated databases Standby databases (single instance and RAC) Fleet Maintenance Hub includes the following features:  Subscription option: For databases and grids that are not subscribed, Fleet Maintenance Hub provides the option to subscribe them to an image, once an image is identified. Automatic patch recommendations: Fleet Maintenance Hub provides patch recommendations for gold images. Compliance with images: Fleet Maintenance Hub provides information on the targets that are missing required security patch recommendations.



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for	Configuration and Compliance Features	The Database Lifecycle Management Pack for Oracle Database includes the following compliance and configuration features:
Oracle Database		<ul> <li>Compliance frameworks, standards, and extensibility to meet industry and regulatory compliance requirements.</li> </ul>
		<ul> <li>Compliance management of Exadata Engineered Systems.</li> <li>Secure and monitor the health of each Exadata component based on the Autonomous Health Framework EXAchk.</li> <li>Configuration drift management to continually monitor any</li> </ul>
		number of targets for drift from a live or saved reference target.
		<ul> <li>Configuration Collection Extensibility to create custom configuration collections and extend current collections.</li> </ul>
		<ul> <li>Configuration Compare, one-to-one and one-to-many.</li> <li>Configuration History to report and notify on configuration or relationship changes during a specific time frame.</li> </ul>
		Configuration Instance Browser of items and associations associated with a target.
		<ul> <li>Configuration Save for reference, baselines or Gold Standards.</li> </ul>
		<ul> <li>Configuration Search on a specific target or across relationships.</li> </ul>
		<ul> <li>Configuration Topology for a specified target and its dependencies along with other targets that are dependent on it.</li> </ul>
Database Lifecycle Management Pack for	Schema Features	The Database Lifecycle Management Pack for Oracle Database includes the following schema features:
Oracle Database		<ul> <li>Schema and Data Comparisons automate the comparison of database schema and data across Databases or saved baselines.</li> </ul>
		<ul> <li>Schema and Data Synchronization to propagate database objects and schemas with or without data, and update database object definitions.</li> </ul>
		Schema Change Plans allow developers to add changes to the schema in a plan that can be applied to multiple databases.
		<ul> <li>Schema Comparisons to compare database objects in two databases or baselines in Enterprise Manager or SQL developer.</li> </ul>
		<ul> <li>Real-time schema change detection to track schema changes in real time to identify unwanted or unplanned changes.</li> </ul>
Database Lifecycle Management Pack for	Pluggable Database Management	The Database Lifecycle Management Pack for Oracle Database includes the following PDB features:
Oracle Database		<ul> <li>Manage the entire PDB lifecycle, including the provisioning of CDBs</li> </ul>
		<ul> <li>Create a new PDB using seed</li> </ul>
		<ul> <li>Plug in an unplugged PDB</li> </ul>
		Clone a PDB
		Migrate a Non-CDB as a PDB
		Unplug and drop a PDB     Releasts PDRs between CDRs
		Relocate PDBs between CDBs



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Oracle Fleet Patching & Provisioning (formerly known as Oracle Rapid Home Provisioning) Features	In addition to Fleet Maintenance, the Database Lifecycle Management Pack for Oracle Database includes the features from Oracle Fleet Patching & Provisioning (FPP).
		<ul> <li>Deploy software homes to nodes in a cloud computing environment from a single cluster where you create, store, and manage templates of Oracle homes as images of Oracle software, such as databases, middleware, and applications.</li> </ul>
		When deployed across multiple clusters or access to the home server to provision on a remote cluster, this feature requires the Database Lifecycle Management license for the remote clusters.
		<b>Note:</b> A remote cluster is considered as the server where the clients are installed pointing to a different cluster as a home server.
		When using Enterprise Manager Cloud Control, deployment procedures and patch plans are used on the Oracle Fleet Patching & Provisioning server to:
		<ul><li>Provision</li><li>Patch clusters or Oracle homes</li></ul>



Type of Licensing Information	Licensing Information
Provisioning Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
	The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database:
	Database Provisioning
	<ul> <li>From the Enterprise menu, select Provisioning and Patching, then select Procedure Library. All procedures that Clone and Provision a Database are licensed with the Database Lifecycle Management Pack.</li> <li>From the Enterprise menu, select Provisioning and Patching, then select Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> <li>On the Oracle Database or cluster database target home page, select the Oracle Database menu, then select Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> <li>On the Oracle Container Database home page, select the Oracle Database menu, then select Provision Pluggable Databases. On the Provision Pluggable Databases page, all operations are licensed except for those explicitly mentioned in the Database Database Management Factures as the provision.</li> </ul>
	in the Base Database Management Features section.  RAC Scale Out and Scale Back
	<ul> <li>From the Enterprise menu, select Provisioning and Patching, then select Procedure Library. All procedures that Extend or Scale a database or RAC are licensed with the Database Lifecycle Management Pack.</li> <li>From the Enterprise menu, select Provisioning and Patching, then select Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> <li>On the Oracle cluster database target home page, select the Oracle Database menu, then select Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
	Information



Cloning, and then select Create Full Clone. On the Create Full Clone Pluggable Database page, all features, functions, links, buttons, and drill-downs are licensed as part of the

Database Lifecycle Management Pack.

Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Cloning Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database:
		Full Clone Database
		<ul> <li>From the Database home page, select the Database target menu, Cloning, and then select Create Full Clone. On the Create Full Clone Database page, all features, functions, links, buttons, and drill-downs are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Classic Clone Wizard
		<ul> <li>From the Database home page, select the Database target menu, Cloning, and then select Clone Management. On the Clone Management page, click Switch to Classic Clone. In the Classic Clone wizard, all features, functions, links, buttons and drill-downs are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Refresh Cloned Database
		<ul> <li>From the Database home page, select the Database target menu, Cloning, and then select Clone Management. On the Clone Management page, highlight the cloned database to be refreshed, and then click Refresh.</li> </ul>
		Full Clone PDB
		From the PDB home page, select the PDB target menu,



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Patching and Upgrade Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database:
		Database Update and Upgrade using Fleet Maintenance UI
		<ul> <li>From the Targets menu, select Databases, and in the Administration menu, select Standardization Advisor. This menu is licensed with the Database Lifecycle Management Pack.</li> </ul>
		<ul> <li>From the Targets menu, select Databases, and in the Administration menu, select Fleet Maintenance. All update (patching) and upgrade actions are licensed with the Database Lifecycle Management Pack.</li> </ul>
		<ul> <li>From the Targets menu, select Databases, and in the Administration menu, select Fleet Maintenance Hub. All update (patching) and upgrade actions are licensed with the Database Lifecycle Management Pack.</li> </ul>
		Database Upgrade
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All procedures that Upgrade a Database are licensed with the Database Lifecycle Management Pack.</li> </ul>
		<ul> <li>On the Oracle Database or cluster database target home page (includes Primary and Standby Databases), select the Oracle Database menu, then select Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Database Patching
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All Procedures that patch a database, Clusterware or Real Application Clusters are licensed with the Database Lifecycle Management Pack.</li> </ul>
		Offline Patching
		<ul> <li>From the Setup menu, select Provisioning and Patching, then Offline Patching. From the Online and Offline Setting tab, the Connection, Offline setting is licensed with the Database Lifecycle Management Pack.</li> </ul>
		Hand Defined Devicement Development (HDDD)

**User Defined Deployment Procedures (UDDP)** 

From the **Enterprise** menu, select **Provisioning and** 

Patching, then Procedure Library. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of the Database Lifecycle Management Pack.



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Configuration Management Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database:
		Configuration Compare
		<ul> <li>From the Enterprise menu, select Configuration, then select Comparison and Drift Management. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration Drift
		<ul> <li>From the Enterprise menu, select Configuration, then select Comparison &amp; Drift Management. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> <li>Configuration Consistency</li> </ul>
		<ul> <li>From the Enterprise menu, select Configuration, then select Comparison &amp; Drift Management. Locate the Consistency Overview section of the Dashboard Overview page. All features, functions, links, buttons, and drill-downs on this pag are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration Search
		<ul> <li>From the Enterprise menu, select Configuration, then select Search. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration Browser
		<ul> <li>From the Oracle Database menu, select Configuration. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration History
		<ul> <li>From the Enterprise menu, select Configuration, then select History. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration Save
		<ul> <li>From the Enterprise menu, select Configuration, then select Saved. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Configuration Topology
		<ul> <li>From the Enterprise menu, select Configuration, then select Comparison &amp; Drift Management. Then click the Template tab.</li> </ul>
		Configuration Template Management
		<ul> <li>To access comparison templates, from the Enterprise menu, select Configuration, then select Comparison &amp; Drift Management. Then click the Templates tab.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>From the Enterprise menu, select Configuration, then select Configuration Extensions.</li> </ul>
		Configuration Results Dashboard
		• From the <b>Enterprise</b> menu, select <b>Configuration</b> , then click <b>Comparison &amp; Drift Management</b> .
Database Lifecycle Management Pack for Oracle Database	Compliance Management Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database:
		Compliance Dashboard
		<ul> <li>From the Enterprise menu, select Compliance, then select Dashboard.</li> </ul>
		Compliance Results
		<ul> <li>From the Enterprise menu, select Compliance, then select Results or from the Database home page, select the Database target menu, Compliance, then select Results. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Compliance Library
		<ul> <li>From the Enterprise menu, select Compliance, then select Library. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Standard Associations
		<ul> <li>On the Oracle Database home page, select the Oracle         Database menu, Compliance, and then select Standard             Associations. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database             Lifecycle Management Pack.     </li> </ul>
		Self Update
		<ul> <li>From the Setup menu, select Extensibility, then click Self Update. The downloading and applying of any updates associated with Compliance for database targets are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Compliance Management of Exadata Engineered Systems
		<ul> <li>Select Compliance, then select Results. On the Results page, all features, functions, tabs, links, buttons, and drill- downs are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		<ul> <li>Select Compliance, then select Standard Associations. On the Standard Associations page, all features, functions, links, buttons, and drill-downs are licensed as part of the Database Lifecycle Management Pack.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Schema Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database. Starting from the Database target home page:
		Schema Comparison
		<ul> <li>From the Schema menu, select Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		Schema and Data Synchronization
		<ul> <li>From the Schema menu, select Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
		<ul> <li>Copy Objects</li> <li>From the Schema menu, select Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Database Lifecycle Management Pack.</li> </ul>
Database Lifecycle Management Pack for Oracle Database	Other Licensed Links	The following licensed links, features and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages and links for the Database Lifecycle Management Pack for Oracle Database. Starting from the Database target home page:
		File Synchronization
		<ul> <li>When viewing comparison results differences as described in the Configuration Compare feature, select the configuration specification in the tree on the left. Select Enable File Synchronization. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Lifecycle Management Pack for Oracle Database.</li> </ul>
		Real-Time Schema Change Detection
		<ul> <li>From the Administration menu, select Initialization         Parameters. On the Initialization Parameters page, change the enable_ddl_logging option to TRUE to enable this feature, which is licensed as part of the Database Lifecycle Management Pack.     </li> </ul>
Database Lifecycle Management Pack for Oracle Database	Licensed Parameters	The init.ora parameter ENABLE_DDL_LOGGING is licensed as part of the Oracle Database Lifecycle Management Pack when set to TRUE. When set to TRUE, the database reports schema changes in real time into the database alert log under the message group schema_ddl. The default setting is FALSE.



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Licensed Reports	The following reports are part of the 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 <b>Enterprise Manager</b> home page, and from the <b>Enterprise</b> menu, select <b>Reports</b> , and then select <b>Information Publisher Reports</b> . If you have Oracle Analytics Server installed and configured with Oracle Enterprise Manager along with the out-of-the-box reports, go to Oracle Analytics Server.
		The following reporting areas, reports, and sub-reports under <b>Information Publisher Reports</b> are licensed as part of the Database Lifecycle Management Pack:
		Compliance
		<ul> <li>Deployment and Configuration</li> </ul>
		<ul> <li>Sample Host reports, Configuration Reports</li> </ul>
		<ul> <li>Security</li> </ul>
		The following reporting areas, reports, and sub-reports under your independently configured Oracle Analytics Server installation are licensed as part of the Database Lifecycle Management Pack:
		Compliance
		Deployment and Configuration
		Sample Host reports, Configuration Reports
		<ul> <li>Security</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Licensed CLI Verbs	The following Enterprise Manager command line interface (CLI) verbs are licensed as part of the Database Lifecycle Management Pack:
		associate_cs_targets
		config_compare
		config_db_service_target
		configure_log_archive_locations
		confirm_instance
		clone_database
		create_database
		create_standby_database
		describe_instance
		describe_procedure_input
		disable_config_history
		<pre>enable_config_history export_compliance_group</pre>
		export compliance standard rule
		export facet
		export standard
		fix_compliance_state
		get_config_searches
		get config templates
		get executions
		get instance data
		get_instance_status
		get_instances
		<pre>get_oms_config_property</pre>
		<pre>get_procedure_types</pre>
		get_procedure_xml
		get_procedures
		get_retry_argument
		get_saved_configs
		ignore_instance
		<pre>import_compliance_object list_oms_config_properties</pre>
		remove_cs_target_association
		reschedule instance
		resume instance
		run config search
		save procedure
		set_config_history_retention_period
		stop_instance
		submit_procedure
		suspend_instance
		db_software_maintenance
		update_and_retry_step
		update_procedure_input upgrade_database
Database Lifecycle Management Pack for	Licensed REST APIs	The following Enterprise Manager REST APIs are licensed as par of the Database Lifecycle Management Pack:
Oracle Database		Deployment Procedure REST Endpoints
		Database Maintenance - Updates (Patching) And Upgrades     REST Endpoints
		Database Maintenance - Using Oracle Fleet Patching And Provisioning (FPP) REST Endpoints

Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Licensed Compliance Repository Views	The following compliance repository views are part of the Database Lifecycle Management Pack for Oracle Database:
		MGMT\$CCC_ALL_OBS_BUNDLES
		MGMT\$CCC ALL OBSERVATIONS
		MGMT\$CCC DIAG ANALYTICS
		MGMT\$CCC DIAG QUEUEBACKLOG
		MGMT\$COMPLIANCE STANDARD
		MGMT\$COMPLIANCE STANDARD GROUP
		MGMT\$COMPLIANCE STANDARD RULE
		MGMT\$COMPOSITE_CS_EVAL_SUMMARY
		MGMT\$CS_ASM_DISKGRP_SETTINGS
		MGMT\$CS_DB_CONTROL_FILE_COUNT
		MGMT\$CS_DB_CONTROL_FIBE_COONT MGMT\$CS_DB_INIT_PARAMS
		MGMT\$CS_DB_INTI_FARAMS MGMT\$CS_DB_RBS_IN_SYSTEM
		MGMT\$CS_DB_RBS_IN_SISIEM MGMT\$CS_DB_REC_SEG_SETTINGS
		MGMT\$CS DB REC TS SETTINGS
		MGMT\$CS_DB_REC_USER_SETTINGS
		MGMT\$CS_DB_REDO_LOG_COUNT
		MGMT\$CS_DB_REDO_LOGS
		MGMT\$CS_DB_TABLESPACES
		MGMT\$CS_DB_TBSP_SEGSPACE_MGMT
		MGMT\$CS_EVAL_SUMMARY
		MGMT\$CS_FEATURE_USAGE
		MGMT\$CS_GROUP_EVAL_SUMMARY
		MGMT\$CS_GROUP_KEYWORD
		MGMT\$CS_HA_INFO
		MGMT\$CS_HIERARCHY
		MGMT\$CS_KEYWORD
		MGMT\$CS_RQS_HIERARCHY
		MGMT\$CS_RULE_ATTRS
		MGMT\$CS_RULEFOLDER
		MGMT\$CS_RULE_EVAL_SUMMARY
		MGMT\$CS_TARGET_ASSOC
		MGMT\$CS_TGT_ASSOC_TXF_REQ
		MGMT\$CSG_HIERARCHY
		MGMT\$CSG_SUBGROUP
		MGMT\$CSR_CURRENT_VIOLATION
		MGMT\$CSR_TARGET_ASSOC
		MGMT\$CSR_VIOLATION_CONTEXT
		MGMT\$CSRF_TARGET_ASSOC
		MGMT\$EM_CS_RULE_EVENT_ERROR
		MGMT\$EM_RULE_VIOL_CTXT_DEF
		MGMT\$ICS_TARGET_ASSOC
		MGMT\$REPOSITORY_RULE_PARAMS
		MGMT\$REPOSITORY_RULE_BIND_VARS
		MGMT\$REPO_RULE_CHK_DETAILS
		MGMT\$RULE_KEYWORD
		MGMT\$RULES EVALUATED PER DAY



Type of Licensing Information	Licensing Information
Licensed Provisioning and Patching Repository Views	The following provisioning and patching repository views are part of the Database Lifecycle Management Pack for Oracle Database:
	Provisioning and Patching Views
	EM\$PROV_APPTYPES EM\$PROVAPP_METADATA EM\$PROVAPP_METADATA_VERSION EM\$PROVAPP_TAGS EM\$PROVAPP_TAG_PROPERTIES MGMT\$PA_RECOM_METRIC_SOURCE
	Patching Views
	GC\$EM_PC_PLAN_PATCHES GC\$EM_PC_PLANS GC\$EM_PC_PLAN_TARGETS GC_PC_EXECUTION_INSTANCES GC_PC_PLAN_ANALYSIS_RS GC_PC_PLAN_REMEDY GC_PC_PLAN_REMEDY GC_PC_PLAN_REMEDY_DETAILS GC_PC_PLAN_USERS GC_PC_TARGETS MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS MGMT\$ARU_FAMILY_PRODUCT_MAP MGMT\$ARU_LANGUAGES MGMT\$ARU_PATCH_RECOMMENDATIONS MGMT\$ARU_PATCH_RECOMMENDATIONS MGMT\$ARU_PRODUCT_RELEASE_MAP MGMT\$ARU_PRODUCTS MGMT\$ARU_PRODUCTS MGMT\$ARU_AFFTED_HOST_OH MGMT\$PA_AFFTED_HOST_OH MGMT\$PA_AFFTED_HOST_OH MGMT\$PA_AFFTED_TARGETS MGMT\$PA_AFFTED_TARGETS MGMT\$PA_FINAL_PATCH_LIST MGMT\$PA_TARGET_MAPPING MGMT\$PA_TARGET_MAPPING MGMT\$PA_APPL_PATCHES_TO_OH MGMT\$PR_APPL_PATCHES_TO_OH MGMT\$PR_APPL_PATCHES_TO_OH MGMT\$PR_APPL_PATCHES_TO_OH_TGT MGMT\$PR_APPL_PATCHES_TO_OH_TGT MGMT\$PR_HOME_NFO MGMT\$PR_HOME_AFFECTED_COUNT MGMT\$PR_HOMES_AFFECTED_COUNT
	Information Licensed Provisioning and



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Licensed Oracle Home Patching Repository Views	The following Oracle home patching repository views are part of the Database Lifecycle Management Pack for Oracle Database:
		MGMT\$APPLIED PATCHES
		MGMT\$APPLIED PATCHSETS
		MGMT\$APPL_PATCH_AND_PATCHSET
		MGMT\$CPF ADVISORY INFO
		MGMT\$CPF_HOMES_INFO
		MGMT\$CPF_PATCH_INFO
		MGMT\$EM_HOMES_PLATFORM
		MGMT\$HOMES_AFFECTED
		MGMT\$OH_CLONE_PROPERTIES
		MGMT\$OH_COMP_DEP_RULE
		MGMT\$OH_COMP_INST_TYPE
		MGMT\$OH_COMPONENT
		MGMT\$OH_CRS_NODES
		MGMT\$OH_DEP_HOMES
		MGMT\$OH_FILE
		MGMT\$OH_HOME_INFO
		MGMT\$OH_INSTALLED_TARGETS
		MGMT\$OH_INV_SUMMARY
		MGMT\$OH_PATCH
		MGMT\$OH_PATCHED_COMPONENT
		MGMT\$OH_PATCHED_FILE
		MGMT\$OH_PATCH_FIXED_BUG MGMT\$OH PATCHSET
		MGMT\$OH_PATCHSET MGMT\$OH VERSIONED PATCHV
		MGMT\$PATCH ADVISORIES



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for	Licensed Configuration Repository Views	The following configuration repository views are part of the Database Lifecycle Management Pack for Oracle Database:
•		Configuration Views
Management Pack for Oracle Database	Repository Views	Database Lifecycle Management Pack for Oracle Database:  Configuration Views  GC\$ECM_CONFIG_SUMMARY GC\$ECM_COMP_PROPERTIES GC\$ECM_CURR_CONFIG GC\$ECM_CURR_CONFIG_FLAT_MEMS GC\$ECM_CURR_CONFIG_SNAPSHOTS GC\$ECM_CURR_TARGET_SNAPSHOTS GC\$ECM_CURR_TARGET_SNAPSHOTS GC\$ECM_GEN_SAVED_CONFIG GC\$ECM_SAVED_CONFIG GC\$ECM_SAVED_CONFIG_FLAT_MEMS GC\$ECM_SAVED_CONFIG_TARGETS GC\$ECM_SAVED_CONFIG_TARGETS GC\$ECM_SAVED_TARGET_SNAPSHOTS MGMT\$CCS_DATA MGMT\$CCS_DATA MGMT\$CCS_DATA_SOURCE MGMT\$CCS_DATA_SOURCE_VISIBLE MGMT\$DB_CONTROLFILES MGMT\$DB_DATAFILES MGMT\$DB_DATAFILES MGMT\$DB_DATAFILES MGMT\$DB_DATAFILES MGMT\$DB_DENINSTANCEINFO MGMT\$DB_TEATUREUSAGE MGMT\$DB_INIT_PARAMS MGMT\$DB_INIT_PARAMS MGMT\$DB_DPTIONS MGMT\$DB_PETONS MGMT\$DB_REDOLOGS MGMT\$DB_REDOLOGS MGMT\$DB_REDOLOGS MGMT\$DB_TABLESPACES MGMT\$DB_TABLESPACES MGMT\$DB_TABLESPACES MGMT\$DB_TABLESPACES MGMT\$DB_TABLESPACES_ALL MGMT\$DB_TABLESPACES_ALL MGMT\$DB_TABLESPACES_ALL MGMT\$DB_TABLESPACES_ALL MGMT\$DB_TABLESPACES_ALL
		MGMT\$ECM_CMP_JOBS MGMT\$ECM_CMP_RPT_CCS_DS MGMT\$ECM CMP_RPT_CCS_DS DTLS
		MGMT\$ECM_CMP_RPT_CCS_PD_ALL MGMT\$ECM_CMP_RPT_CCS_PD_DIFFS
		MGMT\$ECM_CMP_RPT_CI_DIFFS MGMT\$ECM_CMP_VISIBLE_CONFIGS MGMT\$ECM_CURRENT_SNAPSHOTS
		MGMT\$ECM_VISIBLE_SNAPSHOTS MGMT\$SERVICETAG_INSTANCES
		MGMT\$SERVICETAG_REGISTRY MGMT\$UNPATCHABLE_DB_TARGETS



Management Pack	Type of Licensing Information	Licensing Information
Database Lifecycle Management Pack for Oracle Database	Licensed Configuration Repository Views (Continued)	Client Configuration Views
		MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCS MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_OS_COMPONENTS
		MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_RULES MGMT\$CSA_HOST_SW MGMT\$ECM_CONFIG_HISTORY MGMT\$CHANGES_PER_SNAPSHOT
Database Lifecycle Management Pack for Oracle Database	Licensed Security Repository Views	The following Security repository views are part of the Database Lifecycle Management Pack for Oracle Database:  MGMT\$ESA_ALL_PRIVS_REPORT MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT MGMT\$ESA_CONN_PRIV_REPORT MGMT\$ESA_CREATE_PRIV_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DIRECT_PRIV_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_CHEMPISSION_REPORT MGMT\$ESA_OH_OWNERSHIP_REPORT MGMT\$ESA_OH_PERMISSION_REPORT MGMT\$ESA_POWER_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_ADMIN_REPORT

#### Oracle Data Masking and Subsetting Pack

Oracle Data Masking and Subsetting Pack facilitates the creation of production like data for non-production environments by replacing production data with fictitious yet realistic values. Generation of the fictitious data can be performed during export or on a separate staging server. The Subsetting functionality provides the ability to subset a database by deleting or extraction a portion of data. Subsetting can optionally be used in line with masking functionality.

#### **Features**

- Application Data Modeling
- Data Masking Formats Library
- Data Masking Definitions
- Data Subsetting Definitions
- Application Data Modeling, Data Masking and Subsetting Enterprise Manager Command Line Interface (CLI) verbs
- Application Data Modeling accelerator for select versions of Oracle E-Business Suite
- Application Data Modeling accelerator for select versions of Oracle Fusion Applications
- Data Masking templates for select versions of Oracle Fusion Applications
- Data Masking templates for select versions of Oracle E-Business Suite

Oracle Data Masking and Subsetting Pack also includes the following restricted-use licenses:

- Database Gateway for APPC
- Database Gateway for DRDA
- Database Gateway for Informix
- Database Gateway for SQLServer
- Database Gateway for Sybase
- Database Gateway for Teradata

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.

Oracle Data Masking and Subsetting Pack must be licensed for the source database server, i.e., the database from which the data originates. 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.

#### **Licensed Links**

The following are the licensed pages and links for Oracle Data Masking and Subsetting Pack within Oracle Enterprise Manager.

Licensed Page/Link	How to Access
Application Data Models	From the Enterprise Summary home page, click the <b>Enterprise</b> menu, then <b>Quality Management</b> , then <b>Application Data Models</b> .
	From the Oracle database or cluster database target home page, click the <b>Security</b> menu, then <b>Application Data Models</b> .
	All features, functions, links, buttons, and drill-downs on these menus are licensed as part of the Oracle Data Masking and Subsetting Pack.
Data Masking Definitions	From the Enterprise Summary home page, click the <b>Enterprise</b> menu, then <b>Quality Management</b> , then <b>Data Masking Definitions</b> .
	From the Oracle database or cluster database target home page, click the <b>Security</b> menu, then <b>Data Masking Definitions</b> .
	All features, functions, links, buttons, and drill-downs on these menus are licensed as part of the Oracle Data Masking and Subsetting Pack.



Licensed Page/Link	How to Access	
Data Masking Formats	From the Enterprise Summary home page, click the <b>Enterprise</b> menu, then <b>Quality Management</b> , then <b>Data Masking Formats</b> .	
	All features, functions, links, buttons, and drill-downs on these menus are licensed as part of the Oracle Data Masking and Subsetting Pack.	
Data Subset Definitions	From the Enterprise Summary home page, click the <b>Enterprise</b> menu, then <b>Quality Management</b> , then <b>Data Subset Definitions</b> .	
	From the Oracle database or cluster database target home page, click the <b>Schema</b> menu, then <b>Data Subsetting</b> .	
	All features, functions, links, buttons, and drill-downs on these menus are licensed as part of the Oracle Data Masking and Subsetting Pack.	

#### Note:

- 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.
- 2. Application Data Modeling was previously called Data Discovery and Modeling.

#### **Oracle Real Application Testing**

Oracle Real Application Testing includes the following features:

- Database Replay
- SQL Performance Analyzer (SPA)
- Workload Analysis
- Database Migration Planner
- Database Migration Workbench

Management Pack	Type of Licensing Information	Licensing Information
Oracle Real Application Testing	Database Replay	<ul> <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:         <ul> <li>DBMS_WORKLOAD_CAPTURE package and</li> <li>DBMS_WORKLOAD_REPLAY package. The use of the</li> <li>DBMS_WORKLOAD_REPLAY. COMPARE_PERIOD_REPORT() function also requires a license for Oracle Diagnostics Pack.</li> </ul> </li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Real Application Testing	SQL Performance Analyzer (SPA)	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: DBMS_SQLPA package, which is part of the Oracle Real Application Testing option.
Oracle Real Application Testing	Workload Analysis	An Oracle Real Application Testing license permits you to access Workload Analysis functionality through Oracle Enterprise Manager, as well as through the following database server command-line API: DBMS_SQLPA package, which is part of the Oracle Real Application Testing option.
Oracle Real Application Testing	Database Migration Planner	<ul> <li>Database Migration Planner, introduced in Oracle Enterprise Manager Cloud Control 13c, provides a comprehensive end-to-end solution for managing database consolidation with a risk-free and accurate approach to consolidate by eliminating guess work by analyzing historical workload (DB, Host metrics).</li> <li>Provides a heatmap of predicted usage for the new configuration, both Oracle Cloud and on-premises environments.</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 Database Migration Planner page in Oracle Enterprise Manager.         To access Database Migration Planner:     </li> <li>From the Enterprise menu, select Migration, then select Database Migration Planner.</li> <li>All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Planner.</li> </ul>
Oracle Real Application Testing	Database Migration Workbench	<ul> <li>Database Migration Workbench, introduced in Oracle Enterprise Manager Cloud Control 13c, provides a datadriven and systematic approach to consolidate by eliminating guess work and human errors. Database Migration Workbench has three key capabilities: consolidation planning, database migration, and performance validation.</li> <li>Use of the consolidation planning feature of Database Migration Workbench 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 Workbench page in Oracle Enterprise Manager.         <ul> <li>To access Database Migration Workbench, you can use one of the following options:</li> <li>From the Enterprise menu, select Migration, then select Database Migration Workbench.</li> <li>On the database target home page, select the Administration menu, then select Database Migration Workbench.</li> </ul> </li> <li>All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Database Migration Workbench.</li> </ul>



### Exadata Management Pack

The Exadata Management Pack provides advanced monitoring, management, and diagnostics features for mixed fleets of on-premises and Cloud-based Exadata systems, as well as the databases running on these systems.

Management Pack	Type of Licensing Information	Licensing Information
Exadata Management Pack	Prerequisites	The Exadata Management Pack requires the Oracle Diagnostics Pack.
Exadata Management Pack	Features	<ul> <li>The Exadata Management Pack includes the following features:</li> <li>Engineered System Autonomous Health Framework (AHF) Administration: Provides comprehensive monitoring and management of AHF and EXAChk across the Engineered System fleet.</li> <li>Database Impact Advisor: Performs system-wide database CPU usage noisy-neighbor analysis to identify databases whose performance is potentially impacted by other databases or other operating system processes.</li> <li>I/O Resource Management Advisor: Provides interactive visualizations that facilitate the analysis of flash I/O utilization across databases (non-CDB, CDB, and PDB) on an Exadata system in order to identify databases that might be impacted by system I/O limits and I/O usage by other databases, and to determine if the system has capacity for additional I/O load.</li> <li>Exadata Fleet Dashboards: Filters and visualizes Exadata component hardware and software metric data for individual Exadata (on premises and cloud-based) and Recovery Appliance systems.</li> <li>Exascale Advanced Monitoring: Provides advanced IOPS monitoring through the IOPS tab using an interactive Sankey-based diagram of IOPS allocations across Vaults, Storage Pools, and Databases.</li> <li>Exadata Cloud Advanced Monitoring: Provides advanced database inventory monitoring using a Sankey-based topology diagram and a tabular listing of database inventory on the system.</li> <li>Exadata Infrastructure Patching: Leverages Fleet Maintenance to centrally patch Database servers (Bare Metal), Xen DomU, KVM Guests, Storage Servers, and Switches at scale. Also, schedules and performs rollback of patches seamlessly, all from a single platform.</li> </ul>
Exadata Management Pack	Engineered System AHF Administration Licensed	The following are the licensed pages and links for <b>Engineered</b> System AHF Administration in the Exadata Management Pack:
	Links	<ul> <li>From the Enterprise menu, select Compliance, and then select Engineered System Autonomous Health Framework Administration.</li> </ul>
		<ul> <li>From the Targets menu, select Exadata, Actions, and then select Engineered System Autonomous Health Framework Administration.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Exadata Management Pack	Database Impact Advisor Licensed Links	The <b>Database Impact Advisor</b> is available for individual Database Machine targets for which the Exadata Management Pack has been enabled. The following is the licensed page and link for <b>Database Impact Advisor</b> in the Exadata Management Pack:
		<ul> <li>For individual Database Machine targets, in the main Database Machine target menu, select <b>Database Impact</b> Advisor.</li> </ul>
Exadata Management Pack	I/O Resource Management Advisor Licensed Links	The I/O Resource Management Advisor is available for individual Database Machine and Exadata Infrastructure targets for which the Exadata Management Pack has been enabled. The following is the licensed page and link for I/O Resource Management Advisor in the Exadata Management Pack:
		<ul> <li>For individual Database Machine or Exadata Infrastructure targets, in the main target menu, select I/O Resource Management Advisor.</li> </ul>
Exadata Management Pack	Exadata Fleet Dashboards Licensed Links	The following are the licensed pages and links for <b>Exadata Fleet Dashboards</b> in the Exadata Management Pack:
		<ul> <li>From the Enterprise menu, select Dashboards, and then select Exadata Fleet Configuration.</li> </ul>
		<ul> <li>From the Enterprise menu, select Dashboards, and then select Exadata Fleet Aggregated Capacity.</li> </ul>
		<ul> <li>From the Enterprise menu, select Dashboards, and then select Exadata Fleet Capacity.</li> </ul>
		<ul> <li>From the Enterprise menu, select Dashboards, and then select Exadata Fleet Component Capacity.</li> </ul>
Exadata Management Pack	Exascale Advanced Monitoring Licensed Links	The Exascale Advanced Monitoring is available for individual Exascale targets that are associated with a Database Machine target for which the Exadata Management Pack has been enabled. The following is the licensed page and link for Exascale Advanced Monitoring in the Exadata Management Pack:
		On the Exascale home page, select <b>Performance</b> .
		Note that only specific content in the <b>Performance</b> tab on the Exascale home page is a part of the Exadata Management Pack.
Exadata Management Pack	Exadata Cloud Advanced Monitoring Licensed Links	The Exadata Cloud Advanced Monitoring is available for individual Exadata Infrastructure targets for which the Exadata Management Pack has been enabled. The following are the licensed pages and links for Exadata Cloud Advanced Monitoring in the Exadata Management Pack:
		On the Exadata Infrastructure home page, select the Resource Usage tab.
		• On the VM Cluster home page, select the <b>Databases</b> tab.
		Note that only specific content in the Exadata Infrastructure <b>Resource Usage</b> tab and the VM Cluster <b>Databases</b> tab is a part of the Exadata Management Pack.
Exadata Management Pack	Exadata Infrastructure Patching Licensed Links	The following is the licensed page and link for <b>Exadata Infrastructure Patching</b> in the Exadata Management Pack:
		<ul> <li>From the Targets menu, select Exadata, and then click Fleet Maintenance.</li> </ul>

Management Pack	Type of Licensing Information	Licensing Information	
Exadata Management Pack	Exadata Infrastructure Patching Licensed CLI Verbs	The following Enterprise Manager command line interface (CLI) verb is licensed as part of Exadata Infrastructure Patching in the Exadata Management Pack:	
		db_software_maintenance	
		You can use this CLI verb with the following commands:	
		<ul> <li>-registerFPPServer: Registers FPP servers</li> </ul>	
		<ul> <li>-registerFPPClient: Registers FPP client to FPP server</li> </ul>	
		<ul> <li>-optInfPPSeries: Stores the image series information in Enterprise Manager</li> </ul>	
		<ul> <li>-updateVersionStatus: Updates the version status of the image to current</li> </ul>	
		<ul> <li>-createSoftwareImage: Creates a new Exapatch gold image</li> </ul>	
		• -subscribeTarget: Subscribes targets to the selected image	
		<ul> <li>-performOperation: Deploys, updates, or rolls back Exapatch image</li> </ul>	
Exadata Management Pack	Exadata Infrastructure Patching Licensed REST APIs	The following Enterprise Manager REST APIs are licensed as pa of Exadata Infrastructure Patching in the Exadata Management Pack:	
		<ul><li>/em/api/fppServers (POST)</li></ul>	
		<ul><li>/em/api/fppClients (POST)</li></ul>	
		<ul> <li>/em/api/goldImages/actions/fppSeriesOptIn (POST)</li> </ul>	
		<ul> <li>/em/api/goldImages (GET and POST)</li> </ul>	
		<ul><li>/em/api/goldImages/{imageID}/versions (POST)</li></ul>	
		<ul> <li>/em/api/goldImages/{ImageID}/actions/subscribeTargets (POST)</li> </ul>	
		<ul> <li>/em/api/fleetOperations (GET and POST)</li> </ul>	
		<ul><li>/em/api/goldImages/{goldImageId}/versions/{versionId} (PATCH)</li></ul>	

#### Zero Data Loss Recovery Appliance Management Pack

The Zero Data Loss Recovery Appliance Management Pack provides advanced features for managing database fleet backup to one or more Recovery Appliances, and for monitoring and managing a fleet of Recovery Appliances.

Management Pack	Type of Licensing Information	Licensing Information
Zero Data Loss Recovery Appliance Management Pack	Features	The Zero Data Loss Recovery Appliance Management Pack includes the following features:
		<ul> <li>Configure Database Fleet Backup to Recovery Appliance:         Provides the ability to configure a mixed fleet of databases (versions, types, roles) to send backups and redo to a Recovery Appliance, that is, configure them for Recovery Appliance protection.     </li> </ul>
		<ul> <li>Schedule Database Fleet Backup to Recovery Appliance:         Provides the ability to schedule the standardized Oracle-suggested Recovery Appliance backup strategy for a fleet of databases that have already been configured for Recovery Appliance protection.     </li> </ul>
		<ul> <li>Recovery Appliance Protected Database Fleet Archival Backup Management: Performs and manages archival backups of certain databases in the fleet to meet regulatory requirements.</li> </ul>
		<ul> <li>Database Fleet Advanced Backup Configuration for Recovery Appliance Using EMCLI: Supports the configuration of advanced backup topologies involving databases in an Oracle Data Guard configuration and multiple Recovery Appliances.</li> </ul>
Zero Data Loss Recovery Appliance Management Pack	Configure Database Fleet Backup to Recovery Appliance Licensed Links	The following are the licensed pages and links for <b>Configure Database Fleet Backup to Recovery Appliance</b> in the Zero Data  Loss Recovery Appliance Management Pack:
		<ul> <li>From the Targets menu, select Databases, Availability, and then select Configure Fleet Backup to Recovery Appliance.</li> </ul>
		<ul> <li>From the Targets menu, select Recovery Appliances,</li> <li>Actions, and then select Configure Fleet Backup to Recovery Appliance.</li> </ul>
Zero Data Loss Recovery Appliance Management Pack	Schedule Database Fleet Backup to Recovery Appliance Licensed Links	The following are the licensed pages and links for <b>Schedule Database Fleet Backup to Recovery Appliance</b> in the Zero Data  Loss Recovery Appliance Management Pack:
		<ul> <li>From the Targets menu, select Databases, Availability, and then select Schedule Oracle-Suggested Fleet Backup to Recovery Appliance.</li> </ul>
		<ul> <li>From the Targets menu, select Recovery Appliances,</li> <li>Actions, and then select Schedule Oracle-Suggested Fleet Backup to Recovery Appliance.</li> </ul>
Zero Data Loss Recovery Appliance Management Pack	Recovery Appliance Protected Database Fleet Archival Backup Management Licensed	The following are the licensed pages and links to Recovery Appliance Protected Database Fleet Archival Backup Management in the Zero Data Loss Recovery Appliance Management Pack:
	Links	<ul> <li>From the Targets menu, select Recovery Appliances,</li> <li>Archival Backups, and then click Create Archival Backup.</li> </ul>
		<ul> <li>From the Targets menu, select Recovery Appliances,</li> <li>Protected Databases, and then click Create Archival Backup.</li> </ul>
		In the Create Archival Backup dialog box, click Databases in protection policy.



Management Pack	Type of Licensing Information	Licensing Information
Zero Data Loss Recovery Appliance Management Pack	Licensed CLI Verbs	The following parameters in the configure_db_ha - configureBackupToRA Enterprise Manager Command Line Interface (CLI) verb are licensed as part of the Zero Data Loss Recovery Appliance Management Pack:
		<ul><li>-backup_config parameter with values:</li></ul>
		- GOLD
		- GOLD WITH REP
		<ul> <li>br_continuity parameter and associated parameters:</li> </ul>
		<ul><li>alternate_ra_target_name</li></ul>
		- ra local vpc username
		<pre>- alternate_ra_override_connect_desc</pre>
		<pre>- br_continuity_override_connect_desc</pre>
		<ul><li>ship_redo_from_standby</li></ul>
Zero Data Loss Recovery Appliance Management	Licensed REST APIs	The following Enterprise Manager REST APIs are licensed as part of the Zero Data Loss Recovery Appliance Management Pack:
Pack		<ul> <li>/databases/{databaseId}/actions/configureBackup</li> </ul>
		<ul> <li>/databases/actions/bulkConfigureBackup</li> </ul>
		<ul> <li>/databases/actions/bulkSubmitBackup</li> </ul>
		<ul> <li>/zdlra/{raTargetId}/archivalBackups/protectionPolicy/ {protectionPolicyName}</li> </ul>

## Legacy: Configuration Management Pack for Oracle Database

Enterprise Manager Cloud Control no longer offers the Configuration Management Pack for Oracle Database. Enterprise Manager 10g and 11g customers who purchased the Configuration Management Pack for Oracle Database can use the Configuration Management Pack features in Enterprise Manager Cloud Control as described in the following table:



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Feature Summary	You are entitled to use the following features with a previously purchased Configuration Management Pack for Oracle Database License:
		<ul> <li>Compliance Frameworks, Standards and extensibility to meet industry and regulatory compliance requirements.</li> <li>Configuration Collection Extensibility to create custom configuration collections and extend current collections.</li> <li>Configuration Compare: one-to-one, one-to-many, file sync.</li> <li>Configuration History to report on configuration or relations changes during a specific time frame.</li> <li>Configuration Instance Browser to view Configuration Items and associations associated with a target.</li> <li>Configuration Save of configurations for reference, baselines or Gold Standards.</li> <li>Configuration Search for Configuration Items on a specific target or across relationships.</li> <li>Configuration Topology to view topology for a specified target and its dependencies along with other targets that are dependent on it.</li> <li>Exadata Database Machine Configuration provides Configuration Information for all components of the DB Machine including, Storage Cells, Database and InfiniBand Switches.</li> <li>Exadata Database Machine Configuration Actions provides the ability to compare and search. Provides history and compliance information.</li> <li>File Synchronization of configuration file differences during a comparison.</li> <li>Real-time configuration change detection and automation</li> </ul>
Configuration Management Pack for Oracle Database	Feature Summary (Continued)	of compliance frameworks.  With the previous purchase of the Configuration 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.
		<ul> <li>Application Configuration Console provides IT infrastructure teams with an automated "gold master" approach to infrastructure configuration management.         Application Configuration Console includes a restricted-use license for Oracle Database (Enterprise Edition) solely for the purpose of running the Application Configuration Console Server.     </li> <li>Self Update is accessed from the Enterprise Manager home page, click the Setup menu, then Extensibility and Self Update. The downloading and applying any updates associated with Configuration and Compliance are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Licensed Links	The following licensed links, features, and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		You are entitled to use the following features with a previously purchased Configuration Management Pack for Oracle Database License:
		Configuration Instance Browser
		<ul> <li>From the Targets menu, select Databases, and select a         Database. From the database home page, click Oracle         Database, Configuration. All features, functions, links,             buttons, and drill-downs on this menu, excluding Topology,             are licensed as part of the Configuration Management             Pack for Oracle Database.     </li> </ul>
		<ul> <li>From the database home page, select Oracle Database,</li> <li>Configuration. All features, functions, links, buttons, and drill-downs on this menu, excluding Topology, are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Configuration Search
		<ul> <li>From the Enterprise menu, select Configuration and Search. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Configuration History
		<ul> <li>From the Enterprise menu, select Configuration and History. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Configuration Compare
		<ul> <li>From the Enterprise menu, select Configuration and Compare. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management	Licensed Links (continued)	File Synchronization
Pack for Oracle Database		<ul> <li>When viewing comparison results differences as described in the Configuration Compare feature, select the configuration specification in the tree on the left. Select Enable File Synchronization. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Configuration Save
		<ul> <li>From the Enterprise menu, select Configuration and Save. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> <li>Configuration Collection Extensibility</li> </ul>
		-
		<ul> <li>From the Enterprise menu, select Configuration and Custom. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Real-time Configuration Change Detection and Compliance
		<ul> <li>From the Enterprise menu, select Compliance. All features, functions, links, buttons, and drill-downs associated with the Library, Results, and Real-Time Observations pages are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		Configuration Topology
		<ul> <li>From the Target Home Page, click Oracle Database, Configuration, Topology. In the View drop-down, Used By is licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Target Home Page, click Oracle Database, Configuration, Topology, Customization. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Configuration Management Pack for Oracle Database.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Licensed Reports	The following reports are part of the Configuration Management Pack for Oracle Database. These reports and associated features apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		All database reports in each of these sections are licensed for this pack. To access the reports, go to the <b>Enterprise</b> Manager home page, and from the <b>Enterprise</b> menu, select Reports, and then select Information Publisher Reports. If you have Oracle Analytics Server installed and configured with Oracle Enterprise Manager along with the out-of-the-box reports, go to Oracle Analytics Server.
		The following reporting areas, reports, and sub-reports under Information Publisher Reports are licensed as part of the Configuration Management Pack for Oracle Database:  Compliance Configuration The following reporting areas, reports, and sub-reports under your independently configured Oracle Analytics Server installation are licensed as part of the Configuration Management Pack for Oracle Database: Compliance Configuration



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Licensed Configuration Views	The following Configuration repository views are part of the Configuration Management Pack for Oracle Database:
		MGMT\$J2EEAPP_JRFWSPORT MGMT\$J2EEAPP_WEBAPPCOMPONENT
		MGMT\$J2EEAPP_WSCONFIG



lanagement Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Licensed Compliance Views	The following Configuration repository views are part of the Configuration Management Pack for Oracle Database:
		MGMT\$CCC ALL OBS BUNDLES
		MGMT\$CCC ALL OBSERVATIONS
		MGMT\$CCC DIAG ANALYTICS
		MGMT\$CCC_DIAG_QUEUEBACKLOG
		MGMT\$COMPLIANCE STANDARD
		MGMT\$COMPLIANCE_STANDARD_GROUP
		MGMT\$COMPLIANCE STANDARD RULE
		MGMT\$COMPOSITE_CS_EVAL_SUMMARY
		MGMT\$CS EVAL SUMMARY
		MGMT\$CS GROUP EVAL SUMMARY
		MGMT\$CS RULE EVAL SUMMARY
		MGMT\$CS TARGET ASSOC
		MGMT\$J2EEAPP_WSPORTCONFIG
		MGMT\$OS INIT SERVICES
		MGMT\$OS KERNEL PARAMS
		MGMT\$OS LIMITS
		MGMT\$OS MODULES
		MGMT\$OS PROPERTIES
		MGMT\$SERVICETAG INSTANCES
		MGMT\$SERVICETAG_REGISTRY
		MGMT\$UNPATCHABLE DB TARGETS
		MGMT\$WEBLOGIC_APPLICATIONS
		MGMT\$WEBLOGIC_CLUSTER
		MGMT\$WEBLOGIC DOMAIN
		MGMT\$WEBLOGIC EJBCOMPONENT
		MGMT\$WEBLOGIC JDBCDATASOURCE
		MGMT\$WEBLOGIC JDBCMULTIDS
		MGMT\$WEBLOGIC JMSCONNFACTORY
		MGMT\$WEBLOGIC JMSQUEUE
		MGMT\$WEBLOGIC JMSTOPIC
		MGMT\$WEBLOGIC JOLTCONNPOOL
		MGMT\$WEBLOGIC MACHINE
		MGMT\$WEBLOGIC NETWORK CHANNELS
		MGMT\$WEBLOGIC NODEMANAGER
		MGMT\$WEBLOGIC RACONFIG
		MGMT\$WEBLOGIC RAOUTBOUNDCONFIG
		MGMT\$WEBLOGIC RESOURCECONFIG
		MGMT\$WEBLOGIC SERVER
		MGMT\$WEBLOGIC STARTSHUTCLASSES
		MGMT\$WEBLOGIC VIRTUALHOST
		MGMT\$WEBLOGIC WEBAPPCOMPONENT
		MGMT\$WEBLOGIC WORKMANAGER
		MGMT\$WEBLOGIC WSCONFIG



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Oracle Database	Licensed Oracle Home Patching Views	The following Oracle Home Patching repository views are part of the Configuration Management Pack for Oracle Database:
		MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$OH_CLONE_PROPERTIES MGMT\$OH_COMP_DEP_RULE MGMT\$OH_COMP_INST_TYPE MGMT\$OH_COMPONENT MGMT\$OH_CRS_NODES MGMT\$OH_DEP_HOMES MGMT\$OH_DEP_HOMES MGMT\$OH_INSTALLED_TARGETS MGMT\$OH_INSTALLED_TARGETS MGMT\$OH_INSUMMARY MGMT\$OH_PATCH MGMT\$OH_PATCHED_COMPONENT MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHSET MGMT\$OH_PATCHSET MGMT\$OH_PATCHSET MGMT\$OH_PATCHSET MGMT\$OH_PATCHSET MGMT\$OH_PATCH_ADVISORIES
Configuration Management Pack for Oracle Database	Licensed Security Views	The following Security repository views are part of the Configuration Management Pack for Oracle Database:  MGMT\$ESA_ALL_PRIVS_REPORT MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT
		MGMT\$ESA_CONN_PRIV_REPORT  MGMT\$ESA_CREATE_PRIV_REPORT  MGMT\$ESA_DBA_GROUP_REPORT  MGMT\$ESA_DBA_ROLE_REPORT  MGMT\$ESA_DIRECT_PRIV_REPORT  MGMT\$ESA_EXMPT_ACCESS_REPORT  MGMT\$ESA_KEY_OBJECTS_REPORT  MGMT\$ESA_OH_OWNERSHIP_REPORT  MGMT\$ESA_OH_PERMISSION_REPORT  MGMT\$ESA_POWER_PRIV_REPORT  MGMT\$ESA_PUB_PRIV_REPORT  MGMT\$ESA_SYS_PUB_PKG_REPORT  MGMT\$ESA_TABSP_OWNERS_REPORT  MGMT\$ESA_TRC_AUD_PERM_REPORT  MGMT\$ESA_WITH_ADMIN_REPORT  MGMT\$ESA_WITH_GRANT_REPORT



3	Licensed Client Configuration Views	The following Client Configuration repository views are part of the Configuration Management Pack for Oracle Database:  MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_CPUS
		MGMT\$CSA_FAILED MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CPUS
		MGMT\$CSA_FAILED MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CPUS
		MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CPUS
		MGMT\$CSA_HOST_CPUS
		MGMT\$CSA HOST IOCARDS
		MGMT\$CSA HOST NICS
		MGMT\$CSA_HOST_OS_COMPONENTS
		MGMT\$CSA HOST OS PROPERTIES
		MGMT\$CSA HOST OS FILESYSEMS
		MGMT\$CSA HOST RULES
		MGMT\$CSA HOST SW
		MGMT\$ECM CONFIG HISTORY
		MGMT\$ECM_CONFIG_HISTORY_KEY1
		MGMT\$ECM CONFIG HISTORY KEY2
		MGMT\$ECM CONFIG HISTORY KEY3
		MGMT\$ECM_CONFIG_HISTORY_KEY4
		MGMT\$ECM CONFIG HISTORY KEY5
		MGMT\$ECM CONFIG HISTORY KEY6
		MGMT\$HW NIC
		MGMT\$OS COMPONENTS
		MGMT\$OS FS MOUNT
		MGMT\$OS HW SUMMARY
		MGMT\$OS HW SUMMARY
		MGMT\$OS PATCHES
		MGMT\$OS SUMMARY
		MGMT\$SOFTWARE COMPONENT ONEOFF
		MGMT\$SOFTWARE COMPONENTS
		MGMT\$SOFTWARE_COMP_PATCHSET
		MGMT\$SOFTWARE DEPENDENCIES
		MGMT\$SOFTWARE HOMES
		MGMT\$SOFTWARE ONEOFF PATCHES
		MGMT\$SOFTWARE OTHERS
		MGMT\$SOFTWARE_PATCHES_IN_HOMES
		MGMT\$SOFTWARE PATCHSETS

# Legacy: Change Management Pack for Oracle Database

Enterprise Manager Cloud Control no longer offers the Change Management Pack for Oracle Database. Enterprise Manager 10g and 11g Customers who purchased the Change Management Pack for Oracle Database can use the Change Management features in Enterprise Manager Cloud Control as described in the following table:



Management Pack	Type of Licensing Information	Licensing Information
Change Management Pack for Oracle Database	Feature Summary	You are entitled to use the following features with a Change Management Pack for Oracle Database License:
		<ul> <li>Schema Comparisons of database objects in two databases or baselines in Enterprise Manager or SQL developer.</li> </ul>
		<ul> <li>Schema and Data Comparisons to automate the comparison of database schema and data across Databases or saved baselines.</li> </ul>
		<ul> <li>Schema and Data Synchronization to propagate database objects and schemas with or without data, and update database object definitions.</li> </ul>
		<ul> <li>Copy Database Objects with data, with a subset of data, or without data.</li> </ul>
		<ul> <li>Real-time schema change detection to track schema changes in real time to identify unwanted or unplanned changes.</li> </ul>
		With the previous purchase of the Change Management Pack for Oracle Database, you also are entitled to the features described below. 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.
		<ul> <li>Self Update is accessed from the Setup menu, select Extensibility and Self Update. The downloading and applying any updates associated with Database Change Management are licensed as part of the Change Management Pack for Oracle Database.</li> </ul>



**Schema, Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Change Management Pack for Oracle

From the **Targets** menu, select **Databases**, and then select a **Database**. From the database home page, click **Schema**, **Change Management**. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Change Management Pack for Oracle

Management Pack	Type of Licensing Information	Licensing Information
Change Management Pack for Oracle Database	Licensed Links	The following Licensed Links, features, and functions apply only to the Oracle Database target and the associated host ar Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		The following are the licensed pages, links, features, and functions that can be use with an existing Change Management Pack for Oracle Database License:
		Schema Comparison
		<ul> <li>From the Targets menu, select Databases, and then select a Database. From the database home page, click Schema, Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Change Management Pack for Oracle Database.</li> </ul>
		Schema and Data Comparisons
		<ul> <li>From the Targets menu, select Databases, and then select a Database. From the database home page, click Schema, Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Change Management Pack for Oracle Database.</li> </ul>
		Schema and Data Synchronization
		<ul> <li>From the Targets menu, select Databases, and then select a Database. From the database home page, click Schema, Change Management. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Change Management Pack for Oracle Database.</li> </ul>
		Copy Objects
		<ul> <li>From the Targets menu, select Databases, and then select a Database. From the database home page, click</li> </ul>

Database.

Database.

**Real-Time Schema Change Detection** 



Management Pack	Type of Licensing Information	Licensing Information
Change Management Pack for Oracle Database	Licensed Reports	The following reports are part of the Change Management Pack for Oracle Database.
		All the Oracle Database reports in each of these sections are licensed for this pack. To access the reports, go to the <b>Enterprise Manager</b> home page, and from the <b>Enterprise</b> menu, select <b>Reports</b> , and then select <b>Information Publisher Reports</b> . If you have Oracle Analytics Server installed and configured with Oracle Enterprise Manager along with the out-of-the-box reports, go to Oracle Analytics Server.
		The following reporting areas, reports, and sub-reports under <b>Information Publisher Reports</b> are licensed as part of the Change Management Pack for Oracle Database:
		<ul> <li>Database Change Management         The following reporting areas, reports, and sub-reports under your independently configured Oracle Analytics Server installation are licensed as part of the Change Management Pack for Oracle Database:     </li> </ul>
		Database Change Management
Change Management Pack for Oracle Database	Licensed Parameters	The init.ora parameter ENABLE_DDL_LOGGING is licensed as part of the Change Management Pack for Oracle Database when set to TRUE. The default is FALSE.

# Legacy: Provisioning and Patch Automation Pack for Oracle Database

Enterprise Manager Cloud Control no longer offers the Provisioning and Patch Automation Pack for Oracle Database. Enterprise Manager 10g and 11g customers who purchased the Provisioning and Patch Automation Pack for Oracle Database can use the Provisioning and Patch Automation features in Enterprise Manager Cloud Control as described in the following table:



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch Automation Pack for Oracle Database	Feature Summary	You are entitled to use the following features with a previously purchased Provisioning and Patch Automation Pack for Oracle Database license:
Database		<ul> <li>Database license:</li> <li>Database Patching for end-to-end patch automation for Oracle Database and RAC.</li> <li>Database Provisioning to provision databases and Oracle homes.</li> <li>Database Upgrade existing Oracle Database.</li> <li>Patch Recommendations of My Oracle Support Critical Patch Recommendations.</li> <li>Patching Planning of My Oracle Support Patching Plans, patch Validation and Download.</li> <li>Provisioning Procedures to deploy operating system and Oracle Database and Real Application Clusters.</li> <li>RAC Scale Out and Scale Back to extend single instance databases to RAC.</li> <li>With the previous purchase of the Provisioning and Patch Automation 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.</li> <li>The oplan 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 the Provisioning and Patch Automation Pack for Oracle Database.)</li> </ul>
		<ul><li>Migrate to ASM</li><li>Self Update</li></ul>



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch Automation Pack for Oracle Database	Licensed Links	The following licensed links, features, and functions apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack:
		Provisioning Procedures
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All Procedures that Clone, Provision, Patch, and Upgrade a Database are licensed with the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Oracle database or cluster database target home page, click the Oracle Database menu, then Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		Database Upgrade
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All procedures that upgrade a Database are licensed with the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Oracle database or cluster database target home page, click the Oracle Database menu, then Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch	Licensed Links (continued)	Database Provisioning and Cloning
Automation Pack for Oracle Database		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All procedures that Clone and Provision a Database are licensed with the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu ar licensed as part of the Provisioning and Patch Automatic Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Oracle database or cluster database target home page, click the Oracle Database menu, then Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		RAC Scale Out and Scale Back
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Procedure Library. All Procedures that Extend or Scale a database or RAC are licensed with the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, then Database Provisioning. All features, functions, links, buttons, and drill-downs on this menu ar licensed as part of the Provisioning and Patch Automatic Pack for Oracle Database.</li> </ul>
		<ul> <li>From the Oracle cluster database target home page, clic the Oracle Database menu, then Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		Database Patching
		<ul> <li>From the Enterprise Manager home page, click the Enterprise menu, Provisioning and Patching, then Procedure Library. All Procedures that patch a databas Clusterware or Real Application Clusters are licensed wi the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>
		Offline Patching
		<ul> <li>From the Enterprise Manager home page, click the Setumenu, Provisioning and Patching, then Offline Patching. From the Online and Offline Setting tab, the Connection, Offline setting is licensed with the Provisioning and Patch Automation Pack for Oracle Database.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch Automation Pack for Oracle Database	Licensed Reports	The following reports are part of the Provisioning and Patch Automation Pack for Oracle Database. These reports and associated features apply only to the Oracle Database target and the associated host an Oracle Database is deployed on. For management of non-Oracle Database targets, you must purchase the appropriate management pack.
		All reports in each of these sections are licensed for this pack. To access the reports, go to the <b>Enterprise Manager</b> home page, and from the <b>Enterprise</b> menu, select <b>Reports</b> , and then select <b>Information Publisher Reports</b> . If you have Oracle Analytics Server installed and configured with Oracle Enterprise Manager along with the out-of-the-box reports, go to Oracle Analytics Server.
		The following reporting areas, reports, and sub-reports under <b>Information Publisher Reports</b> are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database:
		<ul> <li>Deployment and Configuration</li> </ul>
		The following reporting areas, reports, and sub-reports under your independently configured Oracle Analytics Server installation are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database:
		<ul> <li>Deployment and Configuration</li> </ul>
Provisioning and Patch Automation Pack for Oracle Database	Licensed CLI Verbs	The following Enterprise Manager command line interface (CLI) verbs are licensed as part of the Provisioning and Patch Automation Pack for Oracle Database:
		clone database
		confirm_instance
		create_database
		describe_instance
		describe_procedure_input
		get_executions get instance data
		get instance status
		get instances
		get_procedure_types
		get_procedure_xml
		get_procedures get_retry_argument
		ignore_instance
		reschedule_instance
		resume_instance
		save_procedure
		stop_instance
		<pre>submit_procedure suspend instance</pre>
		update_and_retry_step
		update_procedure_input



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch Automation Pack for Oracle Database	Licensed Provisioning and Patching Views	The following Provisioning and Patching repository views are part of the Provisioning and Patch Automation Pack for Oracle Database:
		Provisioning and Patching Views
		EM\$PROV_APPTYPES EM\$PROVAPP_METADATA EM\$PROVAPP_METADATA_VERSION EM\$PROVAPP_TAG_PROPERTIES EM\$PROVAPP_TAGS MGMT\$PA_RECOM_METRIC_SOURCE
		Patching Views
		GC\$EM_PC_PLAN_PATCHES GC\$EM_PC_PLANS GC\$EM_PC_PLANS GC_PC_EXECUTION_INSTANCES GC_PC_PLAN_ANALYSIS_RS GC_PC_PLAN_ANALYSIS_RS GC_PC_PLAN_REMEDY GC_PC_PLAN_REMEDY_DETAILS GC_PC_PLAN_USERS GC_PC_PLAN_USERS GC_PC_TARGETS MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHESTS MGMT\$ARU_FAMILY_PRODUCT_MAP MGMT\$ARU_LANGUAGES MGMT\$ARU_PATCH_RECOMMENDATIONS MGMT\$ARU_PATCH_RECOMMENDATIONS MGMT\$ARU_PRODUCTS MGMT\$ARU_PRODUCTS MGMT\$ARU_PRODUCT_RELEASE_MAP MGMT\$ARU_RELEASES MGMT\$ARU_TARGETS MGMT\$PA_AFFTED_HOST_OH MGMT\$PA_AFFTED_HOST_OH MGMT\$PA_AFFTED_TARGETS MGMT\$PA_AFFTED_TOH MGMT\$PA_AFFTED_TARGETS MGMT\$PA_AFFTED_TA



Management Pack	Type of Licensing Information	Licensing Information
Provisioning and Patch Automation Pack for Oracle Database	Licensed Oracle Home Patching Views	The following Oracle Home Patching repository views are part of the Provisioning and Patch Automation Pack for Oracle Database:
		MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$OH_CLONE_PROPERTIES MGMT\$OH_COMP_OBEP_RULE MGMT\$OH_COMP_INST_TYPE MGMT\$OH_CRS_NODES MGMT\$OH_DEP_HOMES MGMT\$OH_FILE MGMT\$OH_FILE MGMT\$OH_INSTALLED_TARGETS MGMT\$OH_INSTALLED_TARGETS MGMT\$OH_PATCH MGMT\$OH_PATCHED_COMPONENT MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCH_PATCHV MGMT\$OH_PATCH_ADVISORIES



### Oracle Middleware Enterprise Management

This chapter describes the licensed features and links about the management packs offered by Enterprise Manager in support of Oracle Middleware Enterprise Management:

- WebLogic Server Management Pack Enterprise Edition
- SOA Management Pack Enterprise Edition
- Management Pack for WebCenter
- Management Pack for Oracle Coherence
- Management Pack for Oracle Data Integrator
- Business Intelligence Management Pack

#### WebLogic Server Management Pack Enterprise Edition

The WebLogic Server Management Pack Enterprise Edition offers a solution for managing Oracle Fusion Middleware and Oracle WebLogic Server. This pack provides capabilities that span the solution areas of application performance management, administration, service level management and lifecycle management that span many of these products and components.



All Oracle Enterprise Manager Fusion Middleware Control 12c, Oracle Enterprise Manager Fusion Middleware Control 11g functionality is included with each edition of Oracle Fusion Middleware. The links and areas that require the WebLogic Server Management Pack Enterprise Edition are outside of Fusion Middleware Control.

Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack Gen	General Features	The following general features are available with this pack and, unless otherwise stated, are available from Oracle Enterprise Manager Cloud Control 13c:
		<ul> <li>Enterprise Messaging provides an enterprise-class messaging engine built into the application server for simplified application development and infrastructure management.</li> </ul>
		<ul> <li>Java Mission Control is an intuitive Eclipse-based GUI for analyzing Java Flight Recorder data and is integrated into the WebLogic Diagnostic Framework to enable combined Oracle WebLogic Server and JVM event analysis</li> </ul>
		<ul> <li>Java Flight Recorder captures JVM events in a circular buffer that can be persisted to disk for post-incident analysis.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Application Performance Management Overview	The WebLogic Server Management Pack Enterprise Edition delivers comprehensive management and modeling capabilities for pure Java EE and web service environments for applications running in Oracle WebLogic Server. By combining contextual drill-down modeling capabilities with extensive metrics that can span containers horizontally and the entire vertical stack for Java EE, this pack significantly reduces the cost and complexity of managing Java EE-based environments in development, testing, staging, and production environments.



rwise stated, the following features apply to Oracle Server environment:
dia cate of the order of the or



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Application Performance Management Features (Continued)	<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> <li>Real-time visibility into a JVM and application state without instrumentation overhead.</li> <li>Request performance provides historical views that show the response times for end-user requests from the context of WebLogic Server and the underlying JVM.</li> <li>Service-level objectives provides service-level objectives (SLOs) at any point within the architecture for indicators and alerts.</li> <li>Trace in-flight transactions to view request performance problems in real time. Analyze time spent in each resource bottleneck and Java method.</li> <li>JVM pool monitoring to monitor all JVMs of an application with uniform monitoring settings.</li> </ul>
WLS Management Pack EE	Application Performance Management Features	<ul> <li>The following Application Performance Management features apply to the Oracle WebLogic Server environment:</li> <li>Log Viewer, Log Search, and Log Monitoring to access Oracle Fusion Middleware log files quickly and easily - no matter where they are stored on the file system. Search and correlate log messages across all Oracle Fusion Middleware components' logs based on properties such as time, severity or Execution Context ID (ECID).</li> <li>Contextual visibility into Java EE and web service metrics.</li> <li>Diagnostic Snapshot that preserves snapshots of both JVM monitoring and diagnostics data in correlation with the WebLogic Server log files.</li> <li>Metrics visibility for any layer that generate customized dashboards and views automatically.</li> </ul>
WLS Management Pack EE	Application Performance Management Feature Restrictions	Within the WebLogic Server Management Pack Enterprise Edition product, licensing is restricted to Java EE and does not include SOA, BPEL, WebCenter, Portal, OSB, ESB, AIA, or Pageflow components.
WLS Management Pack EE	Coherence Management Overview	The Coherence Management features within the WebLogic Server Management Pack Enterprise Edition provide comprehensive monitoring and management capabilities for Coherence. The features provide complete cluster visibility by supplying detailed metrics of various cluster artifacts and their interdependencies. You can monitor more than one Coherence cluster from a single console.  Note: The WebLogic Server Management Pack Enterprise Edition license covers Coherence Management when Coherence runs on the same CPU as WebLogic Server. If Oracle Coherence runs in different CPU from WebLogic Server, then you must license the Management Pack for Oracle Coherence.



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Coherence Management Features	Coherence Management within the WebLogic Server Management Pack Enterprise Edition includes the following features:  Automate deployment setup of the Coherence cluster with multiple nodes.  Complete cluster visibility provides detailed metrics for all Coherence components.  Configuration management to change run-time configuration parameters of multiple nodes, caches, and services from the central user interface console.  Monitor multiple clusters from a single console.
WLS Management Pack EE	Lifecycle Management Overview	The lifecycle management features of WebLogic Server Management Pack Enterprise Edition help administrators automate the processes required to manage the lifecycle of Oracle middleware software such as Oracle WebLogic Server. It eliminates manual and time-consuming tasks related to provisioning, patching, configuration management, and compliance management.
WLS Management Pack EE	Lifecycle Management License to Provision	License to provision the following Oracle products is included as part of WebLogic Server Management Pack Enterprise Edition (including both out-of-the-box and user-defined deployment procedures):  WebLogic Server  Forms, Reports  Oracle Coherence
		With the exception of WLS and Coherence components, not all have out-of-the-box provisioning supported. They can be provisioned via user defined procedures.
		Provisioning for the following Fusion Middleware components is not included in the WebLogic Server Management Pack Enterprise Edition license:  SOA Suite BPM Suite Oracle Service Bus AIA WebCenter Suite Oracle Identity Management Oracle Business Intelligence Enterprise Edition



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Lifecycle Management Features	Unless otherwise stated, the following lifecycle management features apply to the Oracle WebLogic Server environment:
		<ul> <li>Migrate a WebLogic Domain to a Domain Partition.</li> <li>Export partition from one domain and import that partition into another domain.</li> <li>Compliance to provide compliance frameworks, standards, and extensibility to meet industry and regulatory compliance requirements. The following out-of-the-box standards are part of Lifecycle Management features:         <ol> <li>Security Technical Implementation Guide (STIG Version 1.1) for Oracle WebLogic Server 12c.</li> </ol> </li> </ul>
		<ol> <li>Technical Implementation Guide (STIG Version 1.2) for Oracle WebLogic Server 12c.</li> <li>Security Technical Implementation Guide (STIG Version 1) for Oracle HTTP Server 12c</li> <li>Configuration Collection Extensibility to create custom configuration collections and extend current collections.</li> <li>Configuration Compare of configurations, one-to-one, one-to-many.</li> <li>Configuration History to report and notify on configuration or relations changes during a specific time frame.</li> <li>Configuration Instance Browser to view configuration items and associations associated with a target.</li> <li>Configuration Save for reference, baselines, or gold standards.</li> <li>Configuration Search for configuration items on a specific target or across relationships.</li> <li>Configuration Topology for a specified target and its dependencies along with other targets that are dependent on it.</li> <li>Disaster Recovery through Site Guard to automate complete site failover of Oracle Fusion Middleware.</li> </ol>
		<ul> <li>Notifications of configuration changes or differences.</li> <li>Patching to provide end-to-end patch automation for Oracle WebLogic Server.</li> <li>Provisioning Deployment Procedures to:         <ul> <li>Clone WebLogic/Middleware Home or WebLogic Domain from profiles stored in the software library.</li> <li>Scale up/down or out WebLogic Domain.</li> <li>Deploy/redeploy/undeploy Java EE applications to Oracle WebLogic Domain(s).</li> <li>Perform first-time provisioning of Middleware Home and/or WebLogic Domains from installation media stored in the software library.</li> </ul> </li> <li>User Defined Deployment Procedures (UDDP) to automate custom processes by creating a procedure from the start by inserting the required phases, steps, and variables.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Lifecycle Management Features (Continued)	<ul> <li>Patch Recommendations (Only applicable to WebLogic Server) for My Oracle Support security patch update recommendations.</li> <li>Real-time configuration change detection and automation of compliance frameworks along with automated observation authorization using a Change Management Connector.</li> <li>Routing Topology to understand relationships and health of a Fusion Middleware Farm/WebLogic Domain and their related targets.</li> <li>Self Update to download and apply updates associated with Patching, Provisioning, and Compliance of Oracle WebLogic Server targets.</li> <li>Synchronization of WebLogic Server Configuration Files (for example, config.xml) from Cloud Control if differences are detected between WebLogic Domains or WebLogic Servers during a configuration comparison operation</li> </ul>
WLS Management Pack EE	Administration Overview	The administration features of WebLogic Server Management Pack Enterprise Edition help administrators perform common administration operations in a WebLogic Server environment directly from Enterprise Manager Cloud Control; thereby, removing the need to drill down and log in to the Oracle Enterprise Manager Fusion Middleware Control console or to the Oracle WebLogic Server Administration Console.



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Administration Features	The following features apply to the Oracle WebLogic Server environment:
_	Administration Features	* * * * * * * * * * * * * * * * * * * *
		Server Template (this feature is applicable to WebLogic Server version 12c and not applicable to earlier versions).
		<ul> <li>Deployed Application administration to edit settings for deployed applications (This feature is applicable to WLS 12.2.1 and later. Not applicable to earlier versions)</li> </ul>
WLS Management Pack EE	Chargeback Feature	Metering and chargeback provide support based on fixed cost, utilization metrics, and configuration parameters of the WebLogic Server.



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Licensed Links Overview	To use any of the features described above, you must purchase licenses to the WebLogic Server Management Pack Enterprise Edition. The Licensed Links content below itemize the Enterprise Manager links that require licensing of the WebLogic Server Management Pack Enterprise Edition, and should not be accessible if the WebLogic Server Management Pack Enterprise Edition has been disabled.
		The WebLogic Server Management Pack Enterprise Edition does not include features for Business Process Execution Language (BPEL), Oracle Service Bus (OSB), Oracle SOA Infra, and Oracle SOA Composite. For these Oracle Fusion Middleware components, the SOA Management Pack Enterprise Edition must be licensed.
		Note: While Enterprise Manager functionality to manage Oracle WebLogic Server is rather consistent across versions of Oracle WebLogic Server, the specific licensable links under the WebLogic Server Management Pack Enterprise Edition and the navigation to those links may be different across different versions of Oracle WebLogic Server. Consequently, some of the following sections distinguish between licensed links for different WebLogic Server versions.



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Oracle Fusion Middleware Target Types	In general, the Licensed Links content below apply to the following Oracle Fusion Middleware target types:  Oracle WebLogic Node Manager Oracle WebLogic Domain Partition Partition Application Deployment Oracle Coherence Domain Partition Cache Oracle Coherence Cache Oracle Coherence Cluster Oracle Coherence Node Oracle Fusion Middleware Farm Oracle WebLogic Domain Oracle WebLogic Cluster Oracle WebLogic Server Business Application SMPP Driver Clustered Application Deployment Domain Application Deployment Oracle HTTP Server (installed either collocated with a WebLogic Domain or as a standalone domain) Oracle Coherence VoiceXML Driver Oracle Forms Services Oracle Portal Oracle Reports Application XMPP Driver Oracle Reports Bridge Oracle Reports Bridge Oracle Reports Server Oracle Reports Tools Oracle User Messaging Service User Messaging Email Driver Java Virtual Machine Java Virtual Machine Java Virtual Machine Domain Partition Exalogic Elastic Cloud



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Licensed Links Outside of Target-Specific Pages	The following are the licensed pages and links for the WebLogic Server Management Pack Enterprise Edition outside of target-specific pages:
		Application Performance Management
		<ul> <li>From the Setup menu, select Middleware Management, and then select Engines And Agents. On the Setup page, the ability to register and manage Application Performance Management Engines and other items are licensable as part of the WebLogic Server Management Pack Enterprise Edition, SOA Management Enterprise Edition, or Real User Experience Insight depending on the type of engine that is added.</li> </ul>
		Compliance
		<ul> <li>From the Enterprise menu, select Compliance. All features, functions, links, buttons, and drill-downs associated with the Library, Real-time Observations, and Results pages are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Self Update
		<ul> <li>From Setup menu, select Extensibility, and then select Self Update. The downloading and applying any updates associated with Patching, Provisioning, and Compliance of middleware targets identified above are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
WLS Management Pack EE	Configuration Licensed Links Outside of Target- Specific Pages	The following are the Configuration licensed pages and links for the WebLogic Server Management Pack Enterprise Edition outside of target-specific pages:
		Configuration Extensions
		<ul> <li>From the Enterprise menu, select Configuration, then Configuration Extensions. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Comparison & Drift Management
		<ul> <li>From the Enterprise menu, select Configuration, then         Configuration and Drift Management. All features, functions,         links, buttons, and drill-downs on this page are licensed as part of         the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Configuration History
		<ul> <li>From the Enterprise menu, select Configuration and History. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Configuration Save
		<ul> <li>From the Enterprise menu, select Configuration, then Saved. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Configuration Search
		<ul> <li>From the Enterprise menu, select Configuration and Search. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Patching Licensed Links Outside of Target-	The following are the Provisioning and Patching licensed pages and links for the WebLogic Server Management Pack Enterprise Edition outside of target-specific pages:
	Specific Pages	Offline Patching
		<ul> <li>From the Setup menu, select Provisioning and Patching, and then select Offline Patching. From the Online and Offline Setting tab, the Connection, Offline setting is licensed with the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		User Defined Deployment Procedures (UDDP)
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, and then select Procedure Library. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of the WebLogic Server Management Pack Enterprise Edition</li> <li>WebLogic Server Patching</li> </ul>
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, and then select Patches and Updates. From this page, the Patch Recommendations and Patch Plans regions and their content/links related to WebLogic Server are licensed as part of the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Middleware Provisioning
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, and then select Procedure Library. The following predefined procedures are licensed with the WebLogic Server Management Pack Enterprise Edition:</li> </ul>
		Provision Middleware
		Scale up/Scale Out Middleware
		Deploy/Undeploy Java EE Applications
		Coherence Node Provisioning
		<ul> <li>From the Enterprise Manager home page, click the Enterprise menu, then Provisioning and Patching, and finally Middleware Provisioning. All features, functions, links, buttons, and drill-down on the Middleware Provisioning page are licensed as part of the WebLogic Server Management Pack Enterprise Edition - with the exception of:         <ul> <li>SOA Artifacts Provisioning</li> <li>Deploying SOA Composite</li> </ul> </li> </ul>
		BPEL Process Provisioning
		<ul> <li>Oracle Service Bus Resource Provisioning deployment procedures (these are licensable through the SOA Management Pack Enterprise Edition).</li> </ul>
		<ul> <li>Creating Business Intelligence Profile and Business         Intelligence Cloning procedures are not part of the WLS         Management Pack EE, but rather licensable through the Business Intelligence Management Pack.     </li> </ul>
		On the WebLogic Domain target home page from the WebLogic Domain menu, select Provisioning. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the WebLogic Server Management Pack Enterprise Edition - with the exception of SOA Artifacts Provisioning, Deploy SOA Composite, WebCenter Artifacts, and Deploy WebCenter Application (these ar licensable through the SOA Management Pack Enterprise Edition and Management Pack for WebCenter).



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Administration Licensed Links	The following list of links and navigation to them correspond with the administration features for Oracle WebLogic Server and are licensed as part of the WebLogic Server Management Pack Enterprise Edition.
		• <b>Note:</b> You must first log in to the domain before accessing these features. If you have not saved your preferred credentials for accessing these administration features, then you will be prompted to log in to the domain. From the log in page, you have the option to save the credentials as <i>preferred credentials</i> , if they are not already saved. With preferred credentials, you are automatically taken to the page with no log in required.
		Selective Tracing feature
		<ul> <li>From the Targets menu, select Middleware, then select a domain target link to go to the Domain Home page</li> </ul>
		<ul> <li>From the <b>Domain</b> menu, select <b>Logs</b>, and finally <b>Selective Tracing</b>.     </li> </ul>
		Configuration of Log File Settings feature
		<ul> <li>From the Targets menu, select Middleware, then select a WebLogic Server target link to go to the WebLogic Server Home page</li> </ul>
		<ul> <li>From the WebLogic Server menu, select Logs, and then select Log Configuration.</li> </ul>
		Change Center
		• From the <b>Targets</b> menu, select <b>Middleware</b> , then select a domain target link to go to the Domain Home page, assuming you have logged in to the domain (for example, through preferred credentials) and have attempted to access an administration operation.
		<ul> <li>On the Domain Home page from the Change Center region in the upper left-hand corner, select Change Center. All links in the Changes drop-down menu are licensed with WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		System MBean Browser
		<ul> <li>From the Targets menu, select Middleware, then select a domain target link to go to the Domain Home page.</li> </ul>
		<ul> <li>On the Domain Home page from the Domain menu, select System MBean Browser.</li> </ul>
		Manage JDBC Data Sources
		• From the <b>Targets</b> menu, select <b>Middleware</b> , then select a domain target link to go to the Domain Home page.
		<ul> <li>On the Domain Home page from the Domain menu, select JDBC Data Sources.</li> </ul>
		Record configuration actions
		From the <b>Targets</b> menu, select <b>Middleware</b> , then select a domain
		target link to go to the Domain Home page, assuming you have logged in to the domain (for example, through preferred credentials) and have attempted to access an administration operation.
		<ul> <li>On the Domain Home page from the upper left-hand corner near the Change Center drop-down menu, select <b>Recording</b>. All links in the Recording drop-down menu are licensed with WebLogic Server Management Pack Enterprise Edition.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Administration Licensed Links (Continued)	<ul> <li>Server Templates Administration and Machines Administration</li> <li>From the Targets menu, select Environment. All submenus, links and pages accessible from there are licensed with the WebLogic Server Management Pack Enterprise Edition.</li> <li>From the Targets menu, select Administration. All submenus, links and pages accessible from there are licensed with the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
WLS Management Pack EE	WebLogic Cluster and Server Administration Licensed Links	The following list of WebLogic Cluster and Server Administration links and navigation to them correspond with the administration features for Oracle WebLogic Server and are licensed as part of the WebLogic Server Management Pack Enterprise Edition:  WebLogic Cluster Administration
		<ul> <li>From the Targets menu, select Middleware, then select a cluster target link to go to the Cluster Home page.</li> <li>On the Cluster Home page from the Cluster menu, make a selection:         <ul> <li>Administration</li> <li>Logs</li> <li>JDBC Data Sources</li> <li>Routing Topology</li> <li>System MBean Browser</li> <li>.</li> </ul> </li> </ul>
		<ul> <li>WebLogic Server Administration</li> <li>From the Targets menu, select Middleware, then select a WebLogic Server target link to go to the WebLogic Server Home page.</li> <li>From the WebLogic Server Home page from the WebLogic Server menu, select Administration.</li> <li>Note: Under the Administration submenu, the Start/Stop menu item is not licensed under WebLogic Server Management Pack</li> </ul>
WLS Management Pack EE	WebLogic Server Versions 9, 10, and 12 Licensed Links	Enterprise Edition.  The following list of links and navigation to them correspond with managing Oracle WebLogic Server versions 9, 10, and 12 in Oracle Enterprise Manager Cloud Control 13c, and are licensed as part of the WebLogic Server Management Pack Enterprise Edition:
		<ul> <li>Application Deployment page</li> <li>From the Targets menu, select Middleware. Drill down to a WebLogic Domain home page, then click an Application Deployment target. All links and menu items on this page are licensed.</li> <li>Clustered Application Deployment page</li> <li>From the Targets menu, select Middleware. Drill down to a WebLogic Domain home page, then click a Clustered Application Deployment target. All links and menu items on this page are licensed.</li> <li>Middleware-related target pages</li> <li>From the Targets menu, select Middleware. Click links in the Name column to be taken to a target home page. (Note: target home pages can be accessed through other paths as well.) Links and menu items on target home pages are licensed.</li> <li>Note: While home pages for Middleware-related targets are not licensed, the links and menu items on the pages are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Oracle HTTP Server General Monitoring Licensed Links	The following list of links and navigation to them correspond with managing Oracle HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the WebLogic Server Management Pack Enterprise Edition.
		Oracle HTTP Server Home page
		<ul> <li>From the Targets menu, select Middleware, and then select standalone Oracle HTTP Server home page. On this page, all links are licensed.</li> </ul>
		The following licensed links are accessed from the Oracle HTTP Server home page:
		Create Blackout
		<ul> <li>Select Create Blackout. All links, menu items, tabs, and sections on this page are licensed.</li> </ul>
		<ul> <li>Select the Target menu, then select Control, and finally select Create Blackout. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		End Blackout
		<ul> <li>Select End Blackout. All links, menu items, tabs, and sections on this page are licensed.</li> </ul>
		<ul> <li>Select the Target menu, then Control, and finally End Blackout.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Performance Summary
		<ul> <li>Select the Target menu, then Monitoring, and finally Performance Summary. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		All Metrics
		<ul> <li>Select the Target menu, then Monitoring, and finally All Metrics.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Status History
		<ul> <li>Select the Target menu, then Monitoring, and finally Status     History. All links, menu items, tabs, and sections on this page are     licensed</li> </ul>
		Alert History
		<ul> <li>Select the Target menu, then Monitoring, and finally Alert History. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Blackouts
		<ul> <li>Select the Target menu, then Monitoring, and finally Blackouts.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Log Viewer
		<ul> <li>Select the Target menu, then Monitoring, and finally View Log Messages. All links, menu items, tabs, and sections on this page are licensed</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Oracle HTTP Server Configuration Management Licensed Links	The following list of links and navigation to them correspond with managing Oracle HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the WebLogic Server Management Pack Enterprise Edition and are accessed from the Oracle HTTP Server home page:
		Last Collected
		<ul> <li>Select the Target menu, then Configuration, and finally Last Collected. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Compare
		<ul> <li>Select the Target menu, then Configuration, and finally Compare.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Search
		<ul> <li>Select the Target menu, then Configuration, and finally Search.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		History
		<ul> <li>Select the Target menu, then Configuration, and finally History.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Saved
		• Select the <b>Target</b> menu, then <b>Configuration</b> , and finally <b>Saved</b> . All links, menu items, tabs, and sections on this page are licensed
		Topology
		<ul> <li>Select the Target menu, then Configuration, and finally Topology.</li> <li>All links, menu items, tabs, and sections on this page are licensed</li> </ul>
WLS Management Pack EE	Oracle HTTP Server Compliance Management Licensed Links	The following list of links and navigation to them correspond with managing Oracle HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the WebLogic Server Management Pack Enterprise Edition and are accessed from the Oracle HTTP Server home page:
		Results
		<ul> <li>Select the Target menu, then Compliance, and finally Results. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
		Standard Associations
		<ul> <li>Select the Target menu, then Compliance, and finally Standard Associations. All links, menu items, tabs, and sections on this page are licensed</li> </ul>
WLS Management Pack EE	Service Level Management Licensed Links	See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring .
WLS Management Pack EE	Coherence Management Licensed Links	See the Licensed Links of the Management Pack for Oracle Coherence section for the Coherence Management links.



Management Pack	Type of Licensing Information	Licensing Information
	Information  Business Application	<ul> <li>The following links are licensable for Business Application targets:</li> <li>Real User Experience (RUEI) Data</li> <li>From the Targets menu, select Business Application. Select a Business Application target from the list.</li> <li>On the Business Application home page from the Business Application target menu, select Real User Experience (RUEI), and then select RUEI data. All links in the page are licensed by the Real User Experience Insight pack.</li> <li>RUEI Session Diagnostics</li> <li>From the Targets menu, select Business Application. Select a Business Application target from the list.</li> <li>On the Business Application home page from the Business Application target menu, select Real User Experience (RUEI), and finally RUEI Session Diagnostics. All links in the page are licensed by the Real User Experience Insight pack.</li> <li>RUEI Metrics</li> <li>From the Targets menu, select Business Application. Select a Business Application target from the list.</li> </ul>
	<ul> <li>On the Business Application home page from the Business         Application target menu, then select Real User Experience         (RUEI), and finally RUEI Session Diagnostics. All links in the         page are licensed by the Real User Experience Insight pack.</li> <li>From the Business Application menu, access is available to the home         page. There are licensable links on regions that could be part of the         home page under Real User Experience Insight. These licensable links         could include the following regions:</li> </ul>	
	All functions of the following regions are licensed by Real User Experience Insight.  RUEI - Key Performance Indicators (KPI)  RUEI - Top Executed User Requests  RUEI - Top user and application Violations  RUEI - Top Users  RUEI - User Flows  Service Test Status  SLA Dashboard  SLA Summary Region	



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Exalogic Elastic Cloud Management Licensed Links	The following links are accessed from the Exalogic Elastic Cloud target home page and are licensable for Exalogic Elastic Cloud Management. To access the Exalogic Elastic Cloud home page, select <b>Exalogic</b> from the Targets menu
		WebLogic Domains Summary page
		<ul> <li>From the Exalogic Elastic Cloud target menu, select WebLogic Domains, and then select Summary. All links in the page are licensed by the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		WebLogic Domains Members page
		<ul> <li>From the Exalogic Elastic Cloud target menu, select WebLogic Domains, and then select Members. All links in the page are licensed by the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
		Coherence Clusters page
		<ul> <li>From the Exalogic Elastic Cloud target menu, select Coherence Clusters. All links in the page are licensed by the WebLogic Server Management Pack Enterprise Edition.</li> </ul>
WLS Management Pack EE	Chargeback Licensed Link	The following is the licensed Chargeback feature page and link for the WebLogic Server Management Pack Enterprise Edition:
		Chargeback page
		From the Enterprise menu, select Chargeback.
WLS Management Pack EE	Licensed Blackout Repository Views	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:
		MGMT\$BLACKOUT_HISTORY MGMT\$BLACKOUTS
WLS Management Pack	Licensed Inventory Repository Reviews	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:
		MGMT\$METRIC_CATEGORIES MGMT\$GROUP_FLAT_MEMBERSHIPS
WLS Management Pack EE	Licensed Monitoring Repository Reviews	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:
		MGMT\$ALERT_ANNOTATIONS MGMT\$TARGET_METRIC_COLLECTIONS MGMT\$TARGET_METRIC_SETTINGS MGMT\$AVAILABILITY_CURRENT MGMT\$AVAILABILITY_HISTORY MGMT\$ALERT_CURRENT MGMT\$ALERT_HISTORY MGMT\$ALERT_HISTORY MGMT\$METRIC_DETAILS MGMT\$METRIC_CURRENT MGMT\$METRIC_CURRENT MGMT\$METRIC_HOURLY MGMT\$METRIC_DAILY



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Licensed Compliance Repository Reviews	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:
		MGMT\$COMPLIANCE_STANDARD_RULE
		MGMT\$COMPLIANCE_STANDARD
		MGMT\$COMPLIANCE_STANDARD_GROUP
		MGMT\$CS_EVAL_SUMMARY
		MGMT\$COMPOSITE_CS_EVAL_SUMMARY
		MGMT\$CS_RULE_EVAL_SUMMARY
		MGMT\$CS_GROUP_EVAL_SUMMARY
		MGMT\$CS_TARGET_ASSOC
		MGMT\$CCC_ALL_OBSERVATIONS
		MGMT\$CCC_ALL_OBS_BUNDLES
		MGMT\$CCC_DIAG_ANALYTICS MGMT\$CCC_DIAG_QUEUEBACKLOG
		MGMIQCCC_DIAG_QUEUEDACKDOG
WLS Management Pack	Licensed Configuration Repository Reviews	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:
		MGMT\$J2EE_APPLICATION
		MGMT\$J2EEAPP_EJBCOMPONENT
		MGMT\$J2EEAPP_JRFWS
		MGMT\$J2EEAPP_JRFWSOPER
		MGMT\$J2EEAPP_JRFWSPOLICY
		MGMT\$J2EEAPP_JRFWSPORT
		MGMT\$J2EEAPP_WEBAPPCOMPONENT
		MGMT\$J2EEAPP_WSCONFIG
		MGMT\$J2EEAPP_WSPORTCONFIG
		MGMT\$WEBLOGIC_APPLICATIONS
		MGMT\$WEBLOGIC_CLUSTER
		MGMT\$WEBLOGIC_DOMAIN MGMT\$WEBLOGIC EJBCOMPONENT
		MGMT\$WEBLOGIC JDBCDATASOURCE
		MGMT\$WEBLOGIC JDBCMULTIDS
		MGMT\$WEBLOGIC JMSCONNFACTORY
		MGMT\$WEBLOGIC_JMSQUEUE
		MGMT\$WEBLOGIC JMSTOPIC
		MGMT\$WEBLOGIC_JOLTCONNPOOL
		MGMT\$WEBLOGIC_MACHINE
		MGMT\$WEBLOGIC_NETWORK_CHANNELS
		MGMT\$WEBLOGIC_NODEMANAGER
		MGMT\$WEBLOGIC_OPSSSYSPROP
		MGMT\$WEBLOGIC_RACONFIG
		MGMT\$WEBLOGIC_RAOUTBOUNDCONFIG
		MGMT\$WEBLOGIC_RESOURCECONFIG
		MGMT\$WEBLOGIC_SERVER
		MGMT\$WEBLOGIC_STARTSHUTCLASSES
		MGMT\$WEBLOGIC_VIRTUALHOST
		MGMT\$WEBLOGIC_WEBAPPCOMPONENT
		MGMT\$WEBLOGIC_WORKMANAGER MGMT\$WEBLOGIC_WSCONFIG
		MGLI SMEDFORIC MOCONLIG



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Licensed Oracle HTTP Server (OHS) Configuration Repository Reviews	The following repository views are part of the WebLogic Server Management Pack Enterprise Edition:  MGMT\$OHS_CIPHERSUITES MGMT\$OHS_CONFIGFILES MGMT\$OHS_GENERAL MGMT\$OHS_LISTENADDRESSES MGMT\$OHS_PERFRELATED MGMT\$OHS_VIRTUALHOSTS MGMT\$WEBCACHE_TO_OHS_ROUTING MGMT\$EMAS_OHS_COMPRESSION MGMT\$EMAS_OHS_FUSAPPS MGMT\$EMAS_OHS_FUSAPPS MGMT\$EMAS_OHS_GENERAL MGMT\$EMAS_OHS_ROUTINGGENERAL MGMT\$EMAS_OHS_ROUTINGGENERAL MGMT\$EMAS_OHS_ROUTINGGENERAL MGMT\$EMAS_OHS_ROUTINGGENERAL
WLS Management Pack EE	Licensed Reports	The following reports are part of the WebLogic Server Management Pack Enterprise Edition:  WebLogic Server Health Check Report.
WLS Management Pack EE	Licensed Chargeback Reports	The following Oracle Analytics Server reports are licensed under the WLS Management Pack EE. Also, any report created using the "create-like" feature of Oracle Analytics Server referring to the following reports, falls under this license.  Charge Trend Report Usage Trend Report Usage Summary Report Usage Summary Report



Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack EE	Licensed CLI Verbs	The following Enterprise Manager command-line interface (CLI) verbs are licensed as part of the WebLogic Server Management Pack Enterprise Edition:
		add beacon
		add_siteguard_script_hosts
		add swlib storage location
		apply_template_tests
		assign_test_to_target
		clone_as_home
		create_diag_snapshot
		<pre>create_fmw_domain_profile</pre>
		<pre>create_fmw_home_profile</pre>
		create_inst_media_profile
		create_jeeappcomp
		create_operation_plan
		create_patch_plan
		create_siteguard_configuration
		create_siteguard_credential_association
		create_siteguard_script
		create_swlib_entity
		create_swlib_folder
		delete_operation_plan
		delete_siteguard_configuration
		delete_siteguard_credential_association
		delete_siteguard_script
		delete_siteguard_script_hosts
		delete_test
		describe_patch_plan_input
		disable_test
		enable_test
		extend_as_home
		<pre>extract_template get connection mode</pre>
		get_commection_mode get instances
		get operation plan details
		get operation plans
		get_patch_plan_data
		get procedure types
		get procedure xml
		get procedures
		get siteguard configuration
		get siteguard credential association
		get siteguard script hosts
		get siteguard scripts
		list aru languages
		list_aru_platforms
		list_aru_products
		list_aru_releases
		list patch plans
		list_swlib_entities
		list_swlib_entity_subtypes
		list_swlib_entity_types
		list_swlib_folders
		list swlib storage locations

Management Pack	Type of Licensing Information	Licensing Information
WLS Management Pack		refer swlib entity files
EE	(continued)	reimport swlib metadata
		remove beacon
		remove swlib storage location
		run_prechecks
		search patches
		set availability
		set connection mode
		set_key_beacons_and_tests
		set_patch_plan_data
		show_patch_plan
		submit_operation_plan
		submit_patch_plan
		submit_procedure
		sync_beacon
		update_operation_plan
		update_siteguard_configuration
		update_siteguard_credential_association
		update_siteguard_script
		update_swlib_entity
		upload_jeeappcomp_file
		upload_swlib_entity_files
WLS Management Pack EE	Restricted-Use License	WebLogic Server Management Pack Enterprise Edition includes the full capabilities of Enterprise Manager Cloud Control Service Level Management.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.

### SOA Management Pack Enterprise Edition

This pack delivers comprehensive management and modeling capabilities for a Service-Oriented Architecture (SOA)-based environment. By combining SOA run-time governance, business-IT alignment, model-driven metrics, and SOA infrastructure management with Oracle's system management solution, Enterprise Manager Cloud Control significantly reduces the cost and complexity of managing SOA-based environments.

Management Pack	Type of Licensing Information	Licensing Information
SOA Management Pack EE	Supported Cloud Control	This pack supports the following Cloud Control SOA targets:
	SOA Targets	<ul> <li>Business Process Execution Language (BPEL)</li> <li>Oracle Service Bus (service-bus)</li> <li>Oracle Service Bus Cluster</li> <li>Oracle SOA Suite Infrastructure (soa-infra)</li> <li>Oracle SOA Suite Infrastructure Cluster</li> <li>Oracle SOA Suite SOA Composites</li> </ul>
		<ul> <li>Scheduling Service (ESS)</li> </ul>

Management Pack	Type of Licensing Information	Licensing Information
SOA Management Pack EE	Cloud Control SOA Target Features	The SOA Management Pack Enterprise Edition Cloud Control targets include the following features:
		Error Hospital
		<ul> <li>Download Composite</li> </ul>
		Heap Map
		<ul> <li>Adapter metrics provide throughput and error metrics for different adapters in graphical format.</li> </ul>
		<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Business-IT alignment provides integration for business KF and system metrics in one system for correlation and trending.</li> </ul>
		• Centralized management console to monitor and manage enterprise components from a central location.
		<ul> <li>Configuration management information collection for the BPEL Process Manager server/domains/processes and Oracle Service Bus.</li> </ul>
		<ul> <li>Deployment automation of BPEL suitcases, OSB resource OSB Domains, SOA artifacts, SOA domains, and SOA composites.</li> </ul>
		<ul> <li>Discovery and service modeling of Oracle BPEL processe Oracle Service Bus-based business and proxy services.</li> <li>Provide automated system modeling capabilities for the So infrastructure.</li> </ul>
		<ul> <li>Ability to download SOA composite.</li> </ul>
		IWS report integration.
		<ul> <li>End-to-end transaction tracing across distributed application components, and monitor and measure performance characteristics of each component.</li> </ul>
		<ul> <li>Historical analysis and reporting of collected metric and configuration data in a central repository.</li> </ul>
		<ul> <li>Infrastructure management to monitor availability and performance of SOA infrastructure components.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors an event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help des tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		<ul> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring setting and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> </ul>
SOA Management Pack EE	Cloud Control SOA Target Features (Continued)	<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> <li>Run-time governance do define SOAP tests to measure and record availability and performance of partner links (or any Web service) and business/proxy services for historical trending, troubleshooting, and root cause analysis purposes</li> <li>Service level management to monitor services from the enduser's perspective using service tests or synthetic transactions, model relationships between services and underlying IT components, and report on achieved service levels</li> </ul>



Faults and Rejected Messages, Deployed Composites, and Dehydration Diagnostics tabs
 From the SOA Infrastructure menu accessible as a subtarget of a WebLogic Domain, these tabs are licensed.

Management Pack	Type of Licensing Information	Licensing Information
SOA Management Pack EE	Cloud Control SOA Target Licensed Links	The following links are licensable for Cloud Control SOA targets:
		BPEL Process Manager target pages
		<ul> <li>From the Targets menu, select Oracle BPEL Process Manager, then click Go. A list of BPEL Process Manager targets appears. All target pages linked from this list are licensed.</li> </ul>
		Process List page
		<ul> <li>On the Oracle BPEL Process Manager page, select         Processes at the top of the page. The BPEL Process List         page appears, which shows all the deployed BPEL         processes. All links and controls on the Process List page         are licensed.     </li> </ul>
		Oracle BPEL Process page
		<ul> <li>On the Oracle BPEL Process Manager page, click one of the processes in the list. The Oracle BPEL Process page appears. All links and controls on the Oracle BPEL Process page are licensed.</li> </ul>
		Oracle Service Bus targets
		<ul> <li>From the Targets menu, select Oracle Service Bus, then click Go. A list of Oracle Service Bus targets appears. All target pages linked from this list are licensed.</li> </ul>
		Save Test button
		<ul> <li>On the Oracle Service Bus target page, from the Web Services selection above, select the <b>Test Web Services</b> menu item. This button is licensed.</li> </ul>
		Blackouts
		<ul> <li>From the SOA Infrastructure menu accessible as a sub- target of a WebLogic Domain, this item under the Control menu is licensed.</li> </ul>
		Faults tab
		<ul> <li>From the SOA Infrastructure menu accessible as a subtarget of a WebLogic Domain, select the Service Engine menu item, then the BPEL Engine submenu item. On the BPEL Engine page, this tab is licensed.</li> </ul>
		Monitoring, Provisioning, and Configuration menus
		<ul> <li>From the SOA Infrastructure menu accessible as a sub- target of a WebLogic Domain, these menus and all sub- items are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
SOA Management Pack EE	Cloud Control SOA Target Licensed Links (Continued)	<ul> <li>Deployment Procedure Links</li> <li>On the Oracle Service Bus target page, from the Deployments tab, click the Deployment Procedures link. These deployment procedure links are licensed: SOA Artifacts Provisioning, Deploy SOA Composites, and BPEL Process Provisioning</li> <li>Web Services Selections</li> <li>On the Oracle Service Bus target page, from the WebLogic Domain menu, select Web Services. These selections are licensed: Policy Enforcement Dashboard, Registered Services, and Saved Tests</li> <li>SOA Home</li> <li>On the Oracle Service Bus target page, click the Enterprise Manager Cloud Control Middleware tab. These links are</li> </ul>
SOA Management Pack EE	Licensed Reports	licensed.  All reports associated with the following target types are part of the SOA Management Pack Enterprise Edition:  Oracle BPEL Process Manager  Oracle Service Bus  SOA Composite  SOA Infrastructure
SOA Management Pack EE	Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of the SOA Management Pack Enterprise Edition:  get_instances get_instance_data_xml get_procedures get_procedure_types get_procedure_types get_procedure_xml submit_procedure

# Management Pack for WebCenter

The Management Pack for WebCenter provides monitoring and management for the WebCenter Content: Server, WebCenter Portal: Spaces, WebCenter Portal: Services, and WebCenter Portal: Framework.

Management Pack	Type of Licensing Information	Licensing Information
Management Pack for	Basic Functionality	The Management Pack for WebCenter includes:
WebCenter		<ul> <li>Availability and monitoring of all components.</li> <li>Configuration management.</li> <li>Performance monitoring of all components.</li> <li>Historical analysis and reporting.</li> <li>Thresholds and events.</li> <li>Webcenter Portal Performance Pack.</li> </ul>



ummary	
	The Management Pack for WebCenter includes the following features:



end-user's perspective using service tests or synthetic

Management Pack	Type of Licensing Information	Licensing Information
		transactions, model relationships between services and underlying IT components, and report on achieved service levels.
Management Pack for WebCenter	Feature Summary (Continued)	<ul> <li>Run-time governance to define SOAP tests to measure and record availability and performance of partner links (or any Web service) and business/proxy services for historical trending, troubleshooting, and root cause analysis purposes.</li> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
Management Pack for WebCenter	Licensed Links	The following are the licensed pages and links for the Management Pack for WebCenter pages:
		<ul> <li>WebCenter and Portlet Producer right-hand panes</li> <li>From the Targets menu, select Oracle WebCenter, then click Go. A list of Oracle WebCenter targets appears. Click any target. All alert, policy violation, and historical links in these panes are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for WebCenter	Right-Hand Pane Licensed Links	In addition to all links and sub-nodes, all tabbed pane links and data available in the right-hand pane and all links available from any of the items in the tool bar or by double-clicking an item in the right-hand pane are licensed.
		Application Deployment Menu
		<ul> <li>Select one of the applications under the Application         Deployment node in the left-hand navigation tree, then click the Application Deployment drop-down menu on the page to list the contents. All pages and links from these menu items are licensed: WebCenter, ADF, All, Day, and 2 hours     </li> </ul>
		Portlet Producer Monitoring Links and Menus
		<ul> <li>From the Portlet Producer page, select the Portlet         Producer menu, then select Monitoring. These links and         menu items are licensed: Status History, Alert History,             Blackouts, Policy Violations, and Policy Trend Overview     </li> </ul>
		Create/End Blackout page
		<ul> <li>From the Portlet Producer menu on the Portlet Producer page, select Control. This page is licensed.</li> </ul>
		<ul> <li>From the WebCenter menu on the Portlet Producer page,</li> </ul>
		select Control. This page is licensed.
		WebCenter Monitoring Links and Menus
		<ul> <li>Click the WebCenter menu, then Monitoring. These links and menu items are licensed:</li> </ul>
		Performance Summary
		Service Metrics
		Historical Service Metrics
		Group Space Metrics
		Historical Group Space Metrics
		Status History
		Alert History, Blackouts
		Policy Violation
		Policy Trend Overview
		Configure tab link
		<ul> <li>From the upper-left navigation area, click the Configure tab link. All navigation tree nodes and all tabbed pane links and data available in the right pane are licensed.</li> </ul>
		Resources tab link
		<ul> <li>From the upper-left navigation area, click the Resources tab link. All navigation tree nodes and all tabbed pane links and data available in the right pane are licensed.</li> </ul>
		Custom Views tab link
		<ul> <li>From the upper-left navigation area, click the Custom Views tab link. All navigation tree nodes in the lower-left navigation tree and all tabbed pane links and data available in the right pane are licensed.</li> </ul>
Management Pack for WebCenter	Restricted-Use License	WebCenter Management Pack includes the full capabilities of Enterprise Manager Cloud Control Service Level Management
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.

#### Management Pack for Oracle Coherence

The Management Pack for Oracle Coherence provides comprehensive monitoring, cluster management, cache management and configuration management capabilities for Coherence. This pack provides complete cluster visibility by supplying detailed metrics of various cluster artifacts and their interdependencies. The performance views can be completely customized and saved. The topology view gives graphical representation of dependencies of the components and performance hotspots. Enterprises can monitor more than one Coherence cluster from a single console. Organizations can keep track of node configuration over time and also change run-time configuration parameters for caches and nodes.

Enterprise Manager provides out-of-box support for metric alerts, enabling users to proactively monitor the cluster health. Various performance charts show real-time and historical performance trends. The cache data management features gives ability to perform several operations on any cache in the Coherence cluster (for example, view, import, export, purge, add index, remove index, and so on). Enterprise Manager automates the mundane tasks of setting up Coherence software and creating a cluster on distributed machines. Enterprise Manager also enables users to start and stop new nodes in an already monitored Coherence cluster. Similarly, users can also start and stop the entire cluster. User can monitor the node log files by setting patterns. Enterprise Manager generates alert when the patterns are found matching.



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for Oracle Coherence	Features	The Management Pack for Oracle Coherence includes the following features:
		<ul> <li>Automate deployment and setup of the Coherence cluste with multiple nodes.</li> </ul>
		<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Cache data management to perform operations such as view, export, purge, and so on, on cache data.</li> </ul>
		<ul> <li>Complete cluster visibility of detailed metrics for all Coherence components.</li> </ul>
		<ul> <li>Configuration management to keep track of node configuration over time, change run-time configuration parameters of caches, nodes and services.</li> </ul>
		<ul> <li>Customizable performance views by selecting metrics from the metrics pallet, overlay multiple metrics on the chart, save different views.</li> </ul>
		<ul> <li>Log file monitoring to monitor the node log files by setting patterns.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		<ul> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitor multiple clusters from a single console.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets fo standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCL</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> </ul>
		<ul> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> </ul>
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedure SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> </ul>
		Start and stop nodes in a Coherence cluster.      Chart and stop the action Coherence cluster.
		<ul> <li>Start and stop the entire Coherence cluster.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>Topology view of the Coherence caches, nodes and hosts with related in context performance alerts.</li> </ul>
Management Pack for Oracle Licensed Links Coherence		The following are the licensed pages and links for the Management Pack for Oracle Coherence pages:
		Oracle Coherence Cluster type links
		<ul> <li>From the Targets menu, select Middleware. All links and subordinate pages of the Oracle Coherence Cluster type in the table are licensed.</li> </ul>

# Management Pack for Oracle Data Integrator

Management Pack for Oracle Data Integrator leverages Oracle Enterprise Manager Cloud Control best-in-class application performance management, service level management, and configuration management capabilities to provide a centralized management solution for Oracle Data Integrator Enterprise Edition.



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for Oracle Data Integrator	Features	The Management Pack for Oracle Data Integrator includes the following features:
	Features	<ul> <li>following features:</li> <li>Advanced alert management to provide notification methods, rules and schedules, metric history and associated drill-downs, ability to set blackouts, associate corrective actions with alert, metric extensions, metric snapshots, and monitoring templates.</li> <li>Centralized management console to monitor and manage all enterprise components including ODI domains from a central location.</li> <li>Configuration management for the ODI Agents.</li> <li>Historical analysis and reporting</li> <li>Infrastructure management to monitor availability and performance of ODI infrastructure components: Agents, Repositories, Sources and Targets.</li> <li>Load Plan and Session Monitoring to monitor end-to-end Oracle Data Integrator Load Plans and Sessions activity, review execution statistics and drill-down from a particular Task into a detailed report of Oracle databases activity.</li> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification related actions in incident rule sets, and administrator notification schedules.</li> <li>Performance monitoring to provide real-time and historical performance monitoring.</li> </ul>
		<ul> <li>Service level management to monitor services from the end-user's perspective using service tests or synthetic transactions, model relationships between services and underlying IT components, and report on achieved service levels.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for Oracle Data Integrator	Licensed Links	The following are the licensed pages and links for the Management Pack for Oracle Data Integrator pages:
		Oracle Data Integrator home page links
		<ul> <li>From the Targets menu, select Middleware. From the Middleware page, click Middleware Features and select ODI Home. All links and subordinate pages of the Oracle Data Integrator Home page are licensed.</li> <li>Oracle Data Integrator target type links</li> </ul>
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select any of the ODI target types. From the Oracle Data Integrator target menu, these items are licensed.</li> </ul>

# Business Intelligence Management Pack

This pack provides an integrated solution for ensuring the performance and availability of Oracle Business Intelligence Enterprise Edition (Oracle BI EE) for Release 11g, Release 10g, and BI 12c. Using the pack, you can receive proactive alerts on impending problems for the application, examine run-time statistics to troubleshoot and tune performance, compare configurations across different environments, and keep track of configuration changes to avoid configuration-related problems.

You can use the pack with other Oracle Enterprise Manager management packs and plug-ins to achieve end-to-end management of the entire application environment, including both Oracle and non-Oracle databases, operating systems, storage, and network devices.



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Features	The Business Intelligence Management Pack includes the following features:
		<ul> <li>Automatic discovery support to efficiently and quickly discover targets.</li> <li>Blackouts to suspend monitoring on targets to support</li> </ul>
		scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.
		<ul> <li>Change history to search collected configuration data and view the history of configuration changes for diagnostic and regulatory purposes.</li> </ul>
		<ul> <li>Configuration comparison to provide configuration diagnostics quickly. Replicate configuration in development/staging to production. Make sure that configuration settings among Oracle BI components in a clustered environment are consistent.</li> </ul>
		<ul> <li>Configuration snapshot allows known effective configuration information to be retained for future analysis Save configurations to a configuration file (XML file) or to the Management Repository.</li> </ul>
		<ul> <li>Dashboard reports provide key query statistics for usage trending analysis.</li> </ul>
		<ul> <li>Historical metrics to measure usage and performance metrics for monitored Oracle BI targets. Diagnose performance problems by identifying bottlenecks in any of the monitored Oracle BI targets.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		<ul> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> </ul>
		<ul> <li>Template Collections (with Administration Groups)     automate the deployment of management settings on     targets as they join the group. This includes the use of     Template Collections in the Enterprise Manager console     and EMCLI.</li> </ul>
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures SNMP traps, Webhooks and Slack. Also includes repeat</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Supported Oracle BI EE 11g Targets, and Oracle BI EE 12c Targets	notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.  Performance charts to perform usage analysis and diagnose production problems.  Service level rule defines service-level objectives based on business requirements.  Service tests and beacons record service tests to simulate key end-user activities, and actively measure performance and availability from an end-user perspective.  The licensed pages and links of this pack apply to targets specific to Oracle Business Intelligence EE 11g, and Oracle Business Intelligence EE 12c within Enterprise Manager:  Oracle BI Instance  Oracle BI Cluster Controller  Oracle BI Java Host  Oracle BI Presentation Server  Oracle BI Scheduler  Essbase Server  Essbase Application

Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Oracle BI EE 11g, and Oracle BI EE 12c Licensed Links	The following licensed pages and links of this pack apply to targets specific to Oracle Business Intelligence EE 11g, and Oracle Business Intelligence EE 12c within Enterprise Manager:
		Oracle BI Instance page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Instance.</li> </ul>
		Oracle BI Instance Target menu
		<ul> <li>On the Oracle BI Instance page from the Oracle BI Instance target menu, these items are licensed:</li> </ul>
		Logs*
		Job Activity
		Dashboard Reports
		Scheduler Reports
		Configuration
		Compliance
		• <b>Note:</b> The log viewer functionality is licensed with the WebLogic Server Management Pack Enterprise Edition.
		Availability
		<ul> <li>On the Oracle BI Instance page, the Availability tab and all its sub-tabs are licensed.</li> </ul>
		Oracle BI Cluster Controller page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Cluster Controller.</li> </ul>
		Oracle BI Java Host page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Java hos</li> </ul>
		Oracle BI Presentation Server page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Presentation Server.</li> </ul>
		Oracle BI Server page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Server.</li> </ul>
		Oracle BI Scheduler page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Scheduler.</li> </ul>
		Essbase Server page
		<ul> <li>From the Enterprise Summary page, click the Targets menu, then All Targets. On the All Targets page, select a target of type Essbase Server.</li> </ul>
		Essbase Applications page
		<ul> <li>From the Enterprise Summary page, click the Targets menu, then All Targets. On the All Targets page, select a target of type Essbase Application.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Oracle BI EE 11g Licensed Links (continued)	The following licensed pages and links of this pack apply to Oracle Business Intelligence EE 11g-specific targets within Enterprise Manager:
		Target Menu
		The Job Activity, Configuration, and Compliance menu items and sub-items are licensed on the following pages:
		BI Cluster Controller page
		Oracle BI Java Host page
		Oracle BI Presentation Server page
		Oracle BI Server page
		Oracle BI Schedule page
		Essbase Server page
		Essbase Applications page
		Control Menu
		The Create Blackout and End Blackout menu items are licensed on the following pages:
		Oracle BI Instance page
		Oracle BI Cluster Controller page
		Oracle BI Java host page
		Oracle BI Presentation Server page
		Oracle BI Server page
		Oracle BI Schedule page
		Essbase Server page:
		Monitoring Menu
		The Performance Summary, Status History, Alert History, and Blackouts menu items are licensed on the following pages:
		Oracle BI Instance page
		Oracle BI Cluster Controller page
		Oracle BI Java host page
		Oracle BI Presentation Server page
		Oracle BI Server page
		Oracle BI Schedule page
		Essbase Server page
		Essbase Applications page
Bl Management Pack	Supported Oracle BI EE 10g Targets	The licensed pages and links of this pack apply to the following Oracle Business Intelligence EE 10g-specific targets within Enterprise Manager:
		Oracle BI Analytics Server
		Oracle Bi Analytics Server     Oracle Bi Cluster Controller
		Oracle BI Cluster Controller     Oracle BI Presentation Server
		Oracle BI Suite Enterprise Edition  Oracle BI Data Warshauga Administration Canada (DAC)
		<ul> <li>Oracle BI Data Warehouse Administration Console (DAC) Server</li> </ul>
		Hosts Running BI Components



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Oracle BI EE 10g Licensed Links	The following licensed pages and links of this pack apply to Oracle Business Intelligence EE 10g-specific targets within Enterprise Manager:
		Oracle BI Analytics Server page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Analytics Server.</li> </ul>
		Oracle BI Analytics Server Performance page
		<ul> <li>On the Oracle BI Analytics Server page, select the Performance sub-tab. All features on this page are licensed.</li> </ul>
		Oracle BI Analytics Server Dashboard Reports page
		<ul> <li>On the Oracle BI Analytics Server page, select the Dashboard sub-tab. All features on this page are licensed.</li> </ul>
		Oracle BI Cluster Controller page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Oracle Bl Cluster Controller.</li> </ul>
		Oracle BI Cluster Controller Members page
		<ul> <li>On the Oracle BI Cluster Controller page, select the Members sub-tab. All features on this page are licensed</li> </ul>
		Oracle BI Presentation Server page
		<ul> <li>From the Enterprise Summary page, click the Targets menu, then All Targets. On the All Targets page, select target of type Oracle BI Presentation Server.</li> </ul>
		Oracle BI Presentation Server Performance page
		<ul> <li>On the Oracle BI Presentation Server page, select the Performance sub-tab. All features on this page are licensed.</li> </ul>
		Oracle BI Scheduler page
		<ul> <li>From the Targets menu, select All Targets. From the All Targets page, select a target of type Oracle Bl Schedule name.</li> </ul>
		<ul> <li>On the Oracle BI Schedule page, these items are licensed:</li> </ul>
		Failed BI Jobs Scheduler section
		Next Schedule Jobs section
		All links in the System and Service section
		Oracle BI Suite Enterprise Edition page
		• From the <b>Targets</b> menu, select <b>All Targets</b> . On the All Targets page, select target of type <b>Oracle Bl Suite EE</b> .
		On the Oracle BI Suite EE page, these items are license      Tailed BI John Orberteles page.
		Failed BI Jobs Scheduler section
		All links in the System and Service section
		All links in the Alerts section
		All links in the Policy Violations section



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Oracle BI EE 10g Licensed Links (continued)	Target Menu
		The Monitoring, Control, Job Activity, Information Publisher Reports, Configuration, Compliance, and Target Setup menu items and sub-items are licensed on the following pages:
		Oracle BI Analytics Server page
		Oracle BI Cluster Controller page
		Oracle BI Presentation Server page
		Oracle BI Scheduler page     Oracle BI Pate Washauge Administration Canada (DAC)
		<ul> <li>Oracle BI Data Warehouse Administration Console (DAC)</li> <li>Server page</li> </ul>
		The following licensed pages and links of this pack apply to Oracle Business Intelligence EE 10g-specific targets within Enterprise Manager:
		Oracle BI Suite EE Members page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select the Members sub-tab. All features on this page are licensed.</li> </ul>
		Oracle BI Suite Enterprise Edition System Home page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a System name in the System and Service section. On the System home page, all features on the page are licensed. From the System home page:</li> </ul>
		<ul> <li>Select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the <b>Administration</b> sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the Components sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the <b>Topology</b> sub-tab. All features on this page are licensed.</li> </ul>
		System Charts page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select either System name or Service name.</li> </ul>
		<ul> <li>On the corresponding page, select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		System Administration page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a System name in the System and Service section. On the System Home page, select the Administration sub-tab. All features on this page are licensed.</li> </ul>
		System Components page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a System name in the System and Service section. On the System Home page, select the Components sub-tab. All features on this page are licensed.</li> </ul>
		System Topology page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select an Oracle BI Suite EE name. From the Oracle BI Suite EE page, select either System name or Service name.</li> <li>On the corresponding page, select the Topology sub-tab. All features on these pages are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
BI Management Pack	Oracle BI EE 10g Licensed	System and Service section
	Links (continued)	<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a Service name in the System and Service section. These items are licensed:</li> </ul>
		Black Out button
		Availability link
		All links in the Key Component Summary section
		All links in the Related Links section
		Oracle BI Data Warehouse Administration Console (DAC) Server page
		<ul> <li>From the Enterprise Summary page, click the Targets menu, then All Targets. On the All Targets page, select target of type Oracle BI DAC Server.</li> </ul>
		Oracle BI DAC Server Performance page
		<ul> <li>From the Oracle BI Data Warehouse Administration Console (DAC) Server page, select the <b>Performance</b> sub tab. All features on this page are licensed.</li> </ul>
		The following licensed pages and links of this pack apply to Oracle Business Intelligence EE 10g-specific targets within Enterprise Manager:
		Monitoring Configuration sub-tab
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a Service name in the System and Service section. On the Service Home page, select the Monitoring Configuration sub-tab. These items are licensed:</li> </ul>
		System Configuration
		Root Cause Analysis Configuration
		Service Tests and Beacons
		Availability Definition
		Performance Metrics
		Usage Metrics links
		All links in the Related Links section
		Service System page
		<ul> <li>On the Oracle BI Suite Enterprise Edition page, select a Service name in the System and Service section. On the Service Home page, select the System sub-tab. All features on this page are licensed. On the Service Systen home page, all features on the page are licensed. From the Service System home page:</li> </ul>
		<ul> <li>Select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the <b>Test Performance</b> sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the System sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the <b>Topology</b> sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>Select the Monitoring Configuration sub-tab. All features on this page are licensed.</li> </ul>



4

# **Cloud Management**

This chapter describes the Cloud Management pack offered by Enterprise Manager. Out-of-the-box cloud licenses are granted to already existing targets on which licenses are defined and whenever new targets are discovered the packs are granted automatically. Verify license access information by clicking **Setup**, **Management Packs**, then **Management Pack Access**.

### Oracle Cloud Management Pack for Oracle Database

Oracle Cloud Management Pack for Oracle Database helps to set up a Database Cloud and operate the Database as a Service (DBaaS) model. The following table describes this management pack offered by Enterprise Manager:

Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Prerequisites	The Oracle Cloud Management Pack for Oracle Database requires the Database Lifecycle Management Pack for Oracle Database.



Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Feature Summary	The Oracle Cloud Management Pack for Oracle Database provides the following features:
		<ul> <li>Out-of-box Self Service Portal that allows self-service users to access Cloud services (provisioning applications) without IT intervention.</li> </ul>
		<ul> <li>Self-service database provisioning providing support on physical, virtual and Engineered Systems infrastructure, and Oracle Compute Cloud Service.</li> </ul>
		<ul> <li>Comprehensive deployment models that supports shared server (VM based), shared cluster, shared database (Schema-as-a-Service), and Pluggable Database-as-a- Service (PDBaaS) deployment models.</li> </ul>
		<ul> <li>Snap Clone - a fast, storage-agnostic, space-efficient approach to cloning Oracle Databases.</li> </ul>
		This feature supports Oracle Databases including Pluggable databases (PDBs). Enterprise Manager support for Exadata Sparse Clone, CloneDB, ACFS Snapshotbased thin cloning of Multitenant, and thin cloning on ZFS storage appliance are included under the Snap Clone feature.  • Data Refresh for Full Clones - the ability to refresh the data contained in full clones with the latest from production using newer RMAN backups or using RMAN
		duplicate. This feature significantly reduces the DBA time and effort.
		Note: The ability to create 'new' full clones is licensed under Database Lifecycle Management Pack for Oracle Database, but the additional 'refresh' function requires licensing the Cloud Management Pack for Oracle Database.
		<ul> <li>Administrative flows (non-self service) creates snap clones of source databases, including the ability to refresh the database while maintaining its name and configuration parameters.</li> </ul>
		<ul> <li>Snap Clone using TestMaster Snapshots - TestMaster Snapshots represent a storage snapshot of RMAN Image BACKUP from a production database. This is used to create Storage-efficient clones with periodic data refresh capability.</li> </ul>
		<ul> <li>Grouping of Cloud Infrastructure under the umbrella of 'PaaS Zone' and creation of Homogeneous Cloud Pool(s).</li> </ul>
		<ul> <li>Governance - a role-based access and resource control through quotas and retirement policies.</li> </ul>
		<ul> <li>Chargeback and Metering provides the ability to distribute IT costs to business based on fixed costs, utilization and configuration metrics. In addition, it provides the ability to identify peaks and trending for individual targets.</li> </ul>
		<ul> <li>Programmatic access to the Self Service Portal through REST APIs and EMCLIs.</li> </ul>
Oracle Cloud Management Pack for Oracle Database	Provisioning	Provision new databases, schemas, and PDBs using DBaaS.
. doi: 101 Ordole Database		<ul> <li>Create databases using database templates from the service catalog.</li> </ul>
		<ul><li>Create an empty PDB.</li><li>Create an empty PDB based on profile.</li></ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Hybrid Pluggable-Database- as-a-Service	Provision Pluggable Databases (PDBs) running on OCI Compute.
Oracle Cloud Management Pack for Oracle Database	Full Clone	Create full clones either by using profiles or from a live database.
		<ul> <li>Create a full database clone using RMAN Backup from the Self Service Portal.</li> </ul>
		<ul> <li>Create a full database clone using RMAN Duplicate from the Self Service Portal.</li> </ul>
Oracle Cloud Management Pack for Oracle Database	Snap Clone	Create snap clones either by using profiles or from a live database.
		Storage agnostic approach to create rapid and space efficient clones of large databases. Clones of the production database are often required for test and development purposes, and it is difficult and time consuming to create these clones, especially if the databases are huge.
		Self-service driven approach, which empowers the self-service user to clone databases as required on an ad hoc basis.
		Enterprise Manager offers the following solutions with snap clone:
		<ul> <li>Software solution: ZFS file system clone database</li> <li>Hardware solution: Sun ZFS Storage Appliance and Exadata Sparse Clone</li> </ul>
		The following is the list of procedures that can be performed to create and manage snap clone databases:
		Create a snap clone database
		Create a Test Master Database
		Create a Test Master PDB
		Create a Storage Test Master
		Refresh clone databases
		<ul> <li>Create snap clones from discretely synchronized Test Master</li> </ul>
		<ul> <li>Create snap clones from Storage Test Master</li> </ul>
Oracle Cloud Management Pack for Oracle Database	DBaaS Self Service Portal	Database Self Service Portal allows self service users to view, monitor, and deploy databases on selected zones, as well as, create schemas on running databases.
		<ul> <li>Request a database based on a selected service template.</li> </ul>
		<ul> <li>Request a PDB based on a selected service template.</li> <li>Refresh a database: Keep the data current and consistent with the production database by refreshing it on a regular basis.</li> </ul>
		<ul> <li>Create a database service with one or more schemas and populate the schema with the required data.</li> </ul>
		<ul> <li>Data Guard switchover: Role reversal between the primary database and one of its standby databases.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Maintaining and Customizing Databases	Support for maintaining a database pool and ways to customize a database.
		PDBaaS
		Use EMCLI commands to perform PDBaaS fleet operations such as:
		<ul> <li>Prepare and subscribe to the Software Image</li> <li>PDBaaS Pool Operations performed by SSA Admin</li> <li>Update CDB</li> </ul>
		<ul> <li>PDBaaS Pool Cleanup Operations</li> <li>Customizing DBaaS</li> </ul>
		Pre and post request creation and deletion of scripts: Run custom scripts before and after a service instance has been created.
		Database Onboarding on DBaaS Cloud
		<ul> <li>Perform Database Lifecycle Management operations like creating and deleting a database, startup and shutdown, backup and restore, patching and so on, using the Self Service Portal.</li> </ul>
		<ul> <li>Perform onboarding on DBaaS cloud using an EMCLI command.</li> </ul>
		Database Relocation
		<ul> <li>Migrate an existing database to a new database software pool.</li> </ul>
		<ul> <li>Perform relocation on DBaaS cloud using an EMCLI command.</li> </ul>
		PDB Onboarding on DBaaS Cloud
		<ul> <li>Perform Database Lifecycle Management operations such as creating and deleting PDBs, startup and shutdown, backup and restore, and patching using the Self Service Portal.</li> </ul>
		<ul> <li>Perform PDB onboarding on DBaaS cloud using an EMCLI command.</li> </ul>
		PDB Relocation
		<ul> <li>Migrate an existing PDB to a new PDB software pool.</li> <li>Perform PDB relocation on DBaaS cloud using an EMCLI command.</li> </ul>
		PDB Instance Resize
		<ul> <li>Resize an OEM DBaaS PDB instance by initiating a resize operation to a workload size defined in the corresponding service template.</li> </ul>
		Resize a PDB instance using an EMCLI command.
		PDB Upgrade using Fleet Maintenance
		<ul> <li>Upgrade PDBs provisioned on Enterprise Manager DBaaS cloud.</li> </ul>
		<ul> <li>Upgrade a PDB using an EMCLI command.</li> </ul>
Oracle Cloud Management Pack for Oracle Database	Cloud APIs	<ul> <li>Programmatic access to the Self Service Portal through REST APIs and EMCLIs.</li> </ul>
		<ul> <li>Full support for cloud APIs and RESTful API for automation.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Licensed Links	The following are the licensed pages and links for the Oracle Cloud Management Pack for Oracle Database:
		Licensed actions
		From the Database home page, select the <b>Database</b> target menu. Select <b>Cloning</b> and then select <b>Clone Management</b> . On this page, these actions are licensed:
		Create Clone Databases
		Create Snap Clone Databases
		Create Snapshot Clone
		Promote as Test Master
		Remove from Test Masters
		Refresh
		<ul> <li>Oracle VM Infrastructure home page</li> </ul>
		From the <b>Enterprise</b> menu, select <b>Cloud</b> , then <b>Oracle VM Infrastructure Home</b> .
		<ul> <li>Oracle VM Infrastructure Request Dashboard page</li> </ul>
		From the <b>Enterprise</b> menu, select <b>Cloud</b> , then <b>Oracle VM Infrastructure Request Dashboard</b> .
		<ul> <li>Policies page</li> </ul>
		From the Enterprise menu, select Cloud, then Policies.
		Cloud Home page
		From the <b>Enterprise</b> menu, select <b>Cloud</b> , then <b>Cloud Home</b> .
		Self Service Portal page
		From the <b>Enterprise</b> menu, select <b>Cloud</b> , then <b>Self Service Portal</b> .
		<ul> <li>Chargeback page</li> </ul>
		From the <b>Enterprise</b> menu, select <b>Chargeback</b> .
		Infrastructure page
		From the <b>Setup</b> menu, select <b>Cloud</b> , then select <b>Infrastructure</b> .
		Database page
		From the <b>Setup</b> menu, select <b>Cloud</b> , then select <b>Database</b> .
		<ul> <li>Storage Registration page</li> </ul>
		From the <b>Setup</b> menu, select <b>Provisioning and Patching</b> , then select <b>Storage Registration</b> .
		Snap Clone
		From the Enterprise menu:
		<ul> <li>Select Provisioning and Patching, then select Database Provisioning.</li> </ul>
		<ul> <li>On the Database Provisioning page in the Related Links section of the left menu page, select Provision Pluggable Databases.</li> </ul>
		<ul> <li>From the PDB Operations section, select Create New Pluggable Databases. Click Launch.</li> </ul>
		<ul> <li>From the Pluggable Database Creation Options, select Clone an Existing PDB -&gt; Snap Clone.</li> </ul>
		From the multitenant CDB home page:
		<ul> <li>From the Oracle Database menu, select Provisioning,</li> </ul>



and then select **Provision Pluggable Database**.

Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>From the PDB Operations section, select Create New Pluggable Databases. Click Launch.</li> <li>From the Pluggable Database Creation Options, select</li> </ul>
0 1 01 114		Clone an Existing PDB, and the select Snap Clone.
Oracle Cloud Management Pack for Oracle Database	Licensed RESTful APIs	The following RESTful APIs are licensed:
Fack for Oracle Database		Assembly Operations
		Any POST/GET/PUT/DELETE on /em/cloud/iaas URI space for Resources Assembly Template and Assembly Instance.
		Database and Schema Operations
		Any POST/GET/PUT/DELETE on /em/cloud/dbaas/ URI
		space.
		<ul> <li>DBaaS Setup Operations</li> </ul>
		<pre>Any POST/GET/PUT/DELETE on /em/websvcs/restful/ extws/cloudservices/admin/cfw/v1 URI space.</pre>
Oracle Cloud Management Pack for Oracle Database	Licensed EMCLI Verbs	The following EMCLI verbs are licensed under the Oracle Cloud Management Pack for Oracle Database:
		add_pool_members cancel_cloud_service_requests create_charge_item create_dbaas_quota create_pool create_service_template db_cloud_maintenance db_software_maintenance delete_charge_item delete_cloud_service_instances delete_cloud_user_objects delete_dbaas_quota delete_service_template deploy_rac_software deploy_db_software get_cloud_service_requests get_cloud_service_instances get_cloud_service_instances get_dbaas_quota get_dbaas_quota get_dbaas_quota get_dbaas_request_settings get_metering_data get_pool_capacity_data get_pool_capacity_summary_data get_pool_detail get_service_template get_pool_constraints get_pool_constraints get_pool_criteria
		<pre>get_pool_instance_data get_pool_target_type get_pools list_charge_item_candidates refresh_database remove_pool_members update_dbaas_request_settings update_dbaas_quota update_pool</pre>

Management Pack	Type of Licensing Information	Licensing Information
Oracle Cloud Management Pack for Oracle Database	Licensed Views and Tables	The following objects within the repository schema are licensed under the Oracle Cloud Management Pack for Oracle Database:
		Tables starting with EMCT_CBA.
		<ul> <li>Views starting with EMCT\$CBA.</li> </ul>
		The views:
		GP_EMCT_CBA_TARGET_CHARGE MGMT\$EMCT_CBA_CHARGE_HOURLY MGMT\$EMCT_CBA_CHARGE_DAILY
Oracle Cloud Management Pack for Oracle Database	Licensed Chargeback Reports	The following Oracle Analytics Server reports are licensed under the Oracle Cloud Management Pack for Oracle Database. Also, any report created using the "create-like" feature of Oracle Analytics Server referring the following reports, falls under this license.
		Charge Trend Report
		Charge Summary Report
		Usage Trend Report
		Usage Summary Report



5

# Identity Management Enterprise Management

This chapter describes the licensed features and links of the following management pack offered by Enterprise Manager in support of Identity Management:

· Management Pack Plus for Identity Management

### Management Pack Plus for Identity Management

The Management Pack Plus for Identity Management enables enterprises to proactively monitor the availability, performance, load, and security metrics of various Identity Management components.

Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Supported Environments	This helps improve performance and availability, and reduce the cost and complexity of managing Identity Management deployments, including the following environments:
		Oracle Internet Directory
		Directory Integration Platform
		<ul> <li>Oracle Directory Server Enterprise Edition (formerly Sun Java Directory Server Enterprise Edition)</li> </ul>
		Oracle Virtual Directory
		Oracle Identity Federation
		Oracle Access Manager
		Oracle Identity Manager
		<ul> <li>Oracle Adaptive Access Manager</li> </ul>
		Oracle Mobile & Social
		<ul> <li>Oracle Unified Directory</li> </ul>
Management Pack Plus for Identity Management	License to Provision	License to provision Oracle Identity Management products through user-defined procedures is included as part of Management Pack Plus for Identity Management.



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	General Features	The Management Pack Plus for Identity Management includes the following features:
Identity Management		<ul> <li>Note: A management pack license is required to use the features described below in the Enterprise Manager graphical user interface, command-line interface, and published repository views.</li> <li>Beacons measure availability and performance from representative key user locations.</li> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Complete service monitoring of service availability, performance, usage, and service level compliance.</li> <li>Configuration to track configuration metrics, take configuration snapshots, and compare configurations for Oracle Access Manager 10g components, Oracle Internet Directory 11g, Oracle Directory Integration Platform 11g, Oracle Directory 11g, Oracle Identity Federation 11g and Oracle Directory Server Enterprise Edition 6.x, 7.x, an 11gR1.</li> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help destickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> <li>Monitoring and diagnostics to receive real-time metrics, historical data, and alert notifications. Proactively monitor the Oracle Identity Management environment. Out-of-box collection of key performance metrics for monitored components facilitates rapid time to value.</li> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> <li>Dynamic Runbooks enable subject matter experts to en</li></ul>

Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> <li>Service modeling of critical business functions based on a wide range of supported protocols.</li> </ul>
Management Pack Plus for Identity Management	General Features (Continued)	<ul> <li>Single-step discovery of Identity Management 10g, 11g, and 12c components.</li> </ul>
		Identity Management 10g components include: Oracle Access Manager (OAM) 10g, Oracle Identity Manager (OIM) 9.x, Oracle Identity Federation (OIF) 10g, and Oracle Identity Management Suite 10g (including Oracle Internet Directory, Directory Integration Platform, Delegated Administration Services, and Single Sign-On).
		Identity Management 11g components include: Oracle Internet Directory, Oracle Directory Integration Platform, Oracle Virtual Directory, Oracle Identity Federation, Oracle Access Manager, Oracle Identity Manager, and Oracle Adaptive Access Manager. Single-step discovery enables you to quickly set up your monitoring environment.
		Identity Management 12c components include: Oracle Directory Integration Platform, Oracle Internet Directory, Oracle Access Manager, and Oracle Identity Manager.
		A simple target discovery is also provided for Oracle Directory Server Enterprise Edition 6.x, 7.x, and 11g
		<ul> <li>Business Application Management to create and monitor business application targets to provide an intuitive representation of the relationship between your applications and business transactions and the underlying IT infrastructure.</li> </ul>
Management Pack Plus for Identity Management	Oracle Unified Directory and WebLogic-based Containers Features	The following features are licensed for Oracle Unified Directory and WebLogic-based containers included in the Identity Management product restricted-use licensing that are licensed and managed by the Management Pack Plus for Identity Management:
		<ul> <li>Interactive JVM transaction trace Provide JVM thread tracing to view the response time breakdowns in each layer (servlet, JSP, EJB, JDBC, and SQL) of a JVM container.</li> <li>JVM Diagnostics Agent hot deployment without WebLogic Server restarts or configuration changes.</li> <li>JVM pool monitoring of all JVMs of an application together with uniform monitoring settings.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management		The following features are licensed for WebLogic-based containers included in the Identity Management product restricted-use licensing that are licensed and managed by the Management Pack Plus for Identity Management:
		including e-mail, running custom OS scripts, PL/SQL procedures and SNMP traps; repeat notifications, use of notification-related actions in incident rule sets, administrator notification schedules.
		<ul> <li>Routing Topology to understand relationships and health of a Fusion Middleware Farm/WebLogic Domain and their related targets.</li> </ul>
		<ul> <li>Real-time visibility into a JVM and application state without instrumentation overhead eliminate the need to reproduce problems in a test environment.</li> </ul>
		(Applies to applications deployed to both Oracle Application Server and WebLogic Server)
		<ul> <li>Request performance to provide historical views that show the response times for end-user requests from the context of WebLogic Server and the underlying JVM. Response</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		time breakdowns are available in each layer (servlet, JSP, EJB, JDBC, and SQL) of an WebLogic container.
Management Pack Plus for Identity Management	WebLogic-based Containers Features	The following features are licensed for WebLogic-based containers in the Identity Management product restricted-use licensing that are licensed and managed by the Management Pack Plus for Identity Management:
		<ul> <li>Contextual visibility into Java EE and web service metrics</li> <li>Cross-tier trace with Oracle Database to view the impact of database problems on all associated applications and JVMs, and isolate problems between Java and the database.</li> </ul>
		<ul> <li>Diagnostic Snapshot of both JVM monitoring and diagnostics data in correlation with the WebLogic Server log files.</li> </ul>
		<ul> <li>Differential heap analysis uses memory leak analysis in production, and simplifies memory growth and leak analysis.</li> </ul>
		<ul> <li>Interactive JVM transaction trace to view the response time breakdowns in each layer (servlet, JSP, EJB, JDBC, and SQL) of a JVM container.</li> </ul>
		<ul> <li>JVM Diagnostics Agent hot deployment without WebLogic Server restarts or configuration changes.</li> </ul>
	<ul> <li>Log Viewer to access Oracle Fusion Middleware log files quickly and easily - no matter where they are stored on the file system. Search and correlate log messages across all Oracle Fusion Middleware components' logs based on properties such as time, severity or Execution Context ID (ECID).</li> </ul>	
		<ul> <li>Metrics visibility for any layer to generate customized dashboards and views automatically.</li> </ul>
		<ul> <li>Service-level objectives provide service-level objectives (SLOs) at any point within the architecture for indicators and alerts.</li> </ul>
		Trace in-flight transactions to view request performance problems in real time. Analyze time spent in each resource bottleneck and Java method.
		<ul> <li>WebLogic Domain/JVM pool monitoring of all JVMs of an application with uniform monitoring settings.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Oracle Access Manager Coherence-based Container Features	The following features are licensed for Oracle Access Manager Coherence-based containers included in the Identity Management product restricted-use licensing that are licensed and managed by the Management Pack Plus for Identity Management:
		<ul> <li>Automate deployment and setup of the Coherence cluster with multiple nodes.</li> </ul>
		Blackouts suspend monitoring on targets to support scheduled maintenance periods.
		Cache data management to perform operations such as view, export, purge, and so on, on cache data.
		<ul> <li>Complete cluster visibility of detailed metrics for all Coherence components.</li> </ul>
		<ul> <li>Configuration management to change run-time configuration parameters of multiple nodes, caches, and services from the central user interface console. Keep track of node configuration over period of time, change run-time configuration parameters of caches, nodes and services.</li> <li>Customizable performance views by selecting metrics from the metrics pallet, overlay multiple metrics on the chart, save different views.</li> </ul>
		<ul> <li>Log file monitoring of node log files by setting patterns.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		Metric and Alert/Event History
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitor multiple clusters from a single console.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets.</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		Event Compression reduces incidents by correlating and
		<ul> <li>combining related events into a smaller set of incidents.</li> <li>Template Collections (with administration groups) automate the deployment of management settings on targets as they</li> </ul>
		<ul> <li>Notifications to define and use different notification methods including e-mail, running custom OS scripts, PL/SQL procedures and SNMP traps; repeat notifications, use of notification-related actions in incident rule sets, administrator notification schedules.</li> </ul>
		<ul> <li>Routing Topology to understand relationships and health of a Fusion Middleware Farm/WebLogic Domain and their related targets.</li> </ul>
		<ul> <li>Stop existing nodes and start new ones in a Coherence cluster.</li> </ul>
		Start and stop the entire Coherence cluster.



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>Topology view provide a graphical representation of the Coherence caches, nodes and hosts with related in context performance alerts.</li> </ul>
Management Pack Plus for Identity Management	Oracle Identity Manager SOA-based Container Features	The following features are licensed for Oracle Identity Manager SOA-based containers included in the Identity Management product restricted-use licensing that are licensed and managed by the Management Pack Plus for Identity Management:
		<ul> <li>Adapter metrics provide throughput and error metrics for different adapters in graphical format.</li> </ul>
		<ul> <li>Blackouts suspend monitoring on targets to support scheduled maintenance periods.</li> </ul>
		<ul> <li>Business-IT alignment provides integration for business KPIs and system metrics in one system for correlation and trending.</li> </ul>
		<ul> <li>Centralized management console to monitor and manage all enterprise components from a central location.</li> </ul>
		<ul> <li>Configuration management for the BPEL Process Manager server/domains/processes and Oracle Service Bus.</li> </ul>
		<ul> <li>Deployment automation of BPEL suitcases, OSB resources SOA artifacts, and SOA composites.</li> </ul>
		<ul> <li>Discovery and service modeling of Oracle BPEL processes Oracle Service Bus-based business and proxy services.</li> <li>Provide automated system modeling capabilities for the SOA infrastructure.</li> </ul>
		<ul> <li>Historical analysis and reporting to store collected metric and configuration data in a central repository.</li> </ul>
		<ul> <li>Infrastructure management to monitor availability and performance of SOA infrastructure components.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help des tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		Metric and Alert/Event History
		<ul> <li>Metric Extensions create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets.</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		<ul> <li>Event Compression reduces incidents by correlating and</li> </ul>
		<ul> <li>combining related events into a smaller set of incidents.</li> <li>Template Collections (with administration groups) automate the deployment of management settings on targets as they join the group.</li> </ul>
	<ul> <li>Notifications to define and use different notification methods including e-mail, running custom OS scripts, PL/SQL procedures and SNMP traps; repeat notifications, use of notification-related actions in incident rule sets, administrator notification schedules.</li> </ul>	



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Oracle Identity Manager SOA-based Container Features (Continued)	<ul> <li>Run-time governance to define SOAP tests to measure and record availability and performance of partner links (or any Web service) and business/proxy services for historical trending, troubleshooting, and root cause analysis purposes</li> <li>Service level management to monitor services from the end-user's perspective using service tests or synthetic transactions, model relationships between services and underlying IT components, and report on achieved service levels</li> </ul>
Management Pack Plus for Identity Management	Identity Management 10g Targets	<ul> <li>Access Manager — Access Server</li> <li>Access Manager — Identity Server</li> <li>Access Manager — Access System</li> <li>Access Manager — Identity System</li> <li>Identity Federation Server</li> <li>Identity Federation System</li> <li>Identity Manager Repository</li> <li>Identity Manager Server</li> <li>Identity Manager System</li> <li>Delegated Administration Server</li> <li>Directory Integration Platform Server</li> <li>Oracle Internet Directory</li> <li>Single Sign-On Server</li> <li>Hosts running Identity Management components</li> <li>Generic Service or Web Application targets associated with Access Manager - Access System, Access Manager - Identity System, Identity Federation System, and Identity Manager System Hosts running Identity Management components</li> </ul>
Management Pack Plus for Identity Management	Identity Management 11g Targets	<ul> <li>Oracle Internet Directory</li> <li>Oracle Unified Directory</li> <li>Identity Federation Server</li> <li>Directory Integration Platform Server</li> <li>Oracle Virtual Directory</li> <li>Oracle Access Manager</li> <li>Oracle Access Manager Cluster</li> <li>Oracle Adaptive Access Manager</li> <li>Oracle Identity Manager</li> <li>Oracle Adaptive Access Manager Cluster</li> <li>Oracle Identity Manager Cluster</li> <li>Oracle Identity Manager Cluster</li> <li>Oracle Identity Manager Cluster</li> <li>Generic Service &amp; Identity and Access System targets associated with Identity Management 11g components</li> </ul>
Management Pack Plus for Identity Management	Identity Management 12c Targets	<ul> <li>Oracle Identity Manager</li> <li>Directory Integration Platform Server</li> <li>Oracle Access Manager</li> <li>Oracle Identity Directory</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Oracle Directory S Identity Management Enterprise Edition	Oracle Directory Server Enterprise Edition Targets	With the Oracle System Monitoring plug-in for Oracle Directory Server, a simple target discovery is also provided for Oracle Directory Server Enterprise Edition (formerly Sun Java Directory Server Enterprise Edition) 6.x and 7.x, and ODSEE 11gR1. The following Oracle DSEE target types are supported:
		<ul> <li>Directory Server Enterprise</li> <li>Directory Server Enterprise Edition Server</li> <li>Directory Server Group</li> <li>Hosts running Oracle DSEE components</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Licensed Links	The following licensed pages and links of this pack apply to the following Identity Management-specific targets within Enterprise Manager:
		Identity and Access page
		<ul> <li>From the Targets menu, select Middleware. On the Middleware page, select the Middleware Features menu and then select Identity and Access. All links and drop- down menu items on this page are licensed.</li> </ul>
		Identity Management 11g Targets
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select any of the target types referenced from Identity Management 11g Targets (listed above). All links and drop-down menu items are licensed.</li> </ul>
		Oracle Directory Server Enterprise Edition Targets
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select any of the target types referenced from Oracle Directory Server Enterprise Edition Targets (listed above). All links and drop-down menu items are licensed.</li> </ul>
		Access Manager - Access Server page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Access Manager – Access Server.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> </ul>
		<ul> <li>On the Access Manager – Access Server Home page, these items and all links in these sections are licensed:</li> </ul>
		Black Out button
		Availability link
		Associated Directory Server Information section
		Alerts section
		Host Alerts section
		Configuration section
		Related Links section
		Access Manager - Identity Server page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Access Manager – Identity Server. The Access Manager – Identity Server Home page appears.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> </ul>
		<ul> <li>On the Access Manager - Identity Server Home page, these items and all links in these sections are licensed:</li> </ul>
		Black Out button
		Availability link
		Associated Directory Server Information section
		Alerts section
		Host Alerts section
		Configuration section
		Related Links section



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Licensed Links (continued)	The following licensed pages and links of this pack apply to the following Identity Management-specific targets within Enterprise Manager:
		Access Manager – Identity Server Performance page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Access Manager – Identity Server. On the Access Manager - Identity Server Home page, select the Performance sub-tab. All features on this page are licensed.</li> </ul>
		Access Manager - Access System page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Access Manager – Access System.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> </ul>
		<ul> <li>On the Access Manager - Access System home page, all features on the page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access System home page, select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access System home page, select the <b>Administration</b> sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access System home page, select the Components sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access System home page, select the <b>Topology</b> sub-tab. All features on this page are licensed.</li> </ul>
		Access Manager - Identity System
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Access Manager – Identity System.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> </ul>
		<ul> <li>On the Access Manager - Identity System home page, all features on the page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access Identity home page, select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access Identity home page, select the Administration sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access Identity home page, select the Components sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Access Manager - Access Identity home page, select the <b>Topology</b> sub-tab. All features on this page are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Licensed Links (continued)	The following licensed pages and links of this pack apply to the following Identity Management-specific targets within Enterprise Manager:
		Identity Federation Server
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Federation Server.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> <li>On the Identity Federation Server Home page, these items</li> </ul>
		and all links in these sections are licensed:
		Black Out button
		Availability link
		User Data Store section  Federation Data Store section
		Alerts section
		Host Alerts section
		Related Links section  Identity Federation System
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Federation System.</li> </ul>
		From the Targets menu, select Middleware. From the  Middleware Footures many select Identity and Access
		<ul> <li>Middleware Features menu, select Identity and Access.</li> <li>On the Identity Federation System home page, all features on the page are licensed.</li> </ul>
		<ul> <li>From the Identity Federation System home page, select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Federation System home page, select the Administration sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Federation System home page, select the Components sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Federation System home page, select the Topology sub-tab. All features on this page are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Licensed Links (continued)	The following licensed pages and links of this pack apply to the following Identity Management-specific targets within Enterprise Manager:
		Identity Manager Repository
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Manager Repository.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> </ul>
		<ul> <li>On the Identity Manager Repository home page, these items and all links in these sections are licensed:</li> </ul>
		Black Out button
		Availability link
		Provisioning section
		Associated Remote Managers section
		Alerts section
		Host Alerts section
		Related Links section
		Identity Manager Server
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Manager Server.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. Click the Middleware Features menu, then Identity and Access.</li> </ul>
		<ul> <li>On the Identity Manager Server home page, these items and all links in these sections are licensed:</li> </ul>
		Black Out button
		Availability link
		Alerts section
		Host Alerts section
		Related Links section
		Identity Manager Server Performance page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Manager Server. From the Identity Manager Server home page, select the Performance sub-tab. All features on this page are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
	Licensed Links (continued)	Identity Manager System
Identity Management		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, select a target of type Identity Manager System.</li> </ul>
		<ul> <li>From the Targets menu, select Middleware. From the Middleware Features menu, select Identity and Access.</li> <li>On the Identity Manager System home page, all features of the page are licensed.</li> </ul>
		<ul> <li>From the Identity Manager System home page, select the Charts sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Manager System home page, select the Administration sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Manager System home page, select the Components sub-tab. All features on this page are licensed.</li> </ul>
		<ul> <li>From the Identity Manager System home page, select the Topology sub-tab. All features on this page are licensed.</li> </ul>
		Hosts page with Identity Management Components
		<ul> <li>From the Targets menu, select Middleware. On the Middleware page, click the Middleware Features menu, then Identity and Access. All links on this page are licensed:</li> </ul>
		Home
		Monitoring
		Control
		Job Activity
		Information Publisher Reports
		Administration
		Net Services Administration
		Log File Alerts
		Storage Details
		Remote File Editor
		Execute Host Command
		Privilege Delegation Setting
		Related Targets
		Configuration
		Compliance
		Target Setup
		Target Information
		Hosts
		<ul> <li>From the Targets menu, select Hosts.</li> </ul>
		On the Hosts page, select the <b>Performance</b> sub-tab. All features are this page, and linear an
		<ul> <li>features on this page are licensed.</li> <li>On the Hosts page, select the Administration sub-tab. All features on this page are licensed. (Note: The</li> </ul>
		Administration page is only available for Linux operating systems.)



On the Hosts page, select the **Targets** sub-tab. All features on this page are licensed.

Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for	Licensed Links Outside of	Application Performance Management
Identity Management Target-Specific Pages	Target-Specific Pages	<ul> <li>From the Setup menu, select Middleware Management, and then select Setup. On this page, the ability to register and manage Application Performance Management Engines and other items are licensable as part of the Management Pack Plus for Identity Management.</li> <li>Compliance</li> </ul>
		<ul> <li>From the Enterprise menu, select Compliance. All features, functions, links, buttons, and drill-downs associated with the Library, Real-time Observations, and Results pages are licensed as part of the Management Pack Plus for Identity Management.</li> </ul>
		Configuration Collection Extensibility
		<ul> <li>From the Enterprise menu, select Configuration and Custom. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Managemer Pack Plus for Identity Management.</li> </ul>
		Configuration Compare
		<ul> <li>From the Enterprise menu, select Configuration and Compare. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Managemen Pack Plus for Identity Management.</li> </ul>
	Configuration History	
		<ul> <li>From the Enterprise menu, select Configuration and History. All features, functions, links, buttons, and drill- downs on this page are licensed as part of the Managemen Pack Plus for Identity Management.</li> </ul>
		Configuration Instance Browser
	From the <b>Targets</b> menu, select <b>Middleware</b> . Select a Fusion Middleware related target identified above. From the	

## Management Pack Plus for Identity Management. **Configuration Save**

 From the Enterprise menu, select Configuration and Save. All features, functions, links, buttons, and drill-downs on this page are licensed as part of the Management Pack Plus for Identity Management.

target's menu, click the **Configuration** submenu. All features, functions, links, buttons, and drill-downs from this submenu, excluding Topology, are licensed as part of the

### **Configuration Search**

 From the Enterprise menu, select Configuration and Search. All features, functions, links, buttons, and drilldowns on this page are licensed as part of the Management Pack Plus for Identity Management.



Management Pack	Type of Licensing Information	Licensing Information
Management Pack Plus for Identity Management	Licensed Links Outside of Target-Specific Pages (Continued)	<ul> <li>Configuration Topology</li> <li>From the Enterprise menu, select Configuration and Topology. In the View drop-down menu, Used By is licensed as part of the Management Pack Plus for Identity Management.</li> <li>From the Enterprise menu, select Configuration and Topology, Customization. All features, functions, links, buttons, and drill-downs on this menu are licensed as part of the Management Pack Plus for Identity Management.</li> <li>User Defined Deployment Procedures (UDDP)</li> <li>From the Enterprise menu, select Provisioning and Patching, and then select Procedure Library. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of the Management Pack Plus for Identity Management.</li> <li>Real-time Configuration Change Detection</li> <li>From the Enterprise menu, select Compliance. All</li> </ul>
		features, functions, links, buttons, and drill-downs associated Library, Results and Real-Time Observations pages are licensed as part of the Management Pack Plus for Identity Management.
Management Pack Plus for Identity Management	Real Experience Insight Restricted-Use License	Oracle includes a restricted-use license of Real Use Experience Insight (and its subcomponents) for the express purpose of monitoring Oracle Access Manager SSO URLs and Oracle Identity Manager web-pages served from licensed Oracle Identity Manager containers.
		See Oracle Real User Experience Insight in End-User Monitoring for more information about REUI functionality.
Management Pack Plus for Identity Management	Service Level Management Restricted-Use License	Management Pack Plus for Identity Management includes the full capabilities of Enterprise Manager Cloud Control Service Level Management.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.



6

# Other Infrastructure Management

This chapter describes the licensed features and access points for each of the following categories of other Enterprise Manager infrastructure management:

- Configuration Management Pack for Applications
- Management Pack for Non-Oracle Middleware
- System Monitoring Plug-ins for Non-Oracle Middleware
- System Monitoring Plug-ins for Non-Oracle Databases
- Oracle Enterprise Manager for MySQL

### **Configuration Management Pack for Applications**

The Configuration Management Pack for Applications automates the time-consuming and often error-prone process of managing host software and hardware configurations and deployments for Oracle and non-Oracle software, excluding the Oracle Database. This pack provides capabilities such as search and compare across all systems, configuration monitoring, and compliance management, ensuring consistency across deployments.

You can access the Configuration Management Pack for Applications functionality through the following Enterprise Manager Cloud Control licensed links. These components comprise the features provided by the Configuration Management Pack for Applications.



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Features	The following features and functions can be use with an existing Configuration Management Pack for Applications License:
Configuration Management	Information	The following features and functions can be use with an existing Configuration Management Pack for Applications License:  Discovery and Inventory tracking provides the ability to discover your assets, and track them.  Configuration Management to track inventory, configuration drift and detailed configuration search.  Compliance Management for reporting and management of industry and regulatory compliance standards.  Compliance Frameworks, standards, and extensibility to meet industry and regulatory compliance requirements  Configuration Collection Extensibility to create custom configuration collections and extend current collections  Configuration Compare, one-to-one and one-to-many.  Configuration History to report on configuration or relations changes during a specific time frame.  Configuration Instance Browser to view configuration items and associations associated with a target.  Configuration Save for reference, baselines, or Gold Standards.  Configuration Search on a specific target or across relationships.  Configuration Topology of a specified target and its dependencies along with other targets that are dependent on it.  File Synchronization of differences during a comparison.  Real-time configuration change detection and automation of compliance frameworks.  User Defined Deployment Procedures (UDDP) to automate custom processes by creating a procedure from the start by inserting the required phases, steps, and variables.  Disaster Recovery through Site Guard to automate complete site failover.  Note: Usage of Site Guard is licensed separately for Oracle Database and WebLogic Server via the Database Lifecycle Management Pack for the database tier and WebLogic Server Management Pack for the database tier and MebLogic Server Management Pack for the following features. These features are restricted to the hots software and hardware
		configurations and deployments for Oracle and non-Oracle software, excluding the Oracle Database.
		<ul> <li>Self Update to update Enterprise Manager with new features or fixes based on new versions of software available on Oracle Technology Network (OTN) or My Oracle Support (MOS).</li> </ul>
		The downloading and applying any updates associated with, host, Oracle and non-Oracle software, excluding the Oracle Database, for Configuration and Compliance are licensed as part of the Configuration Management Pack for Applications.



the Configuration Compare feature, select the configuration specification in the tree on the left. Select **Enable File Synchronization**. All features, functions, links, buttons, and

drill-downs on this page are licensed as part of the Configuration Management Pack for Applications.

Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Licensed Links	The following licensed pages, links, features and functions of this pack apply to host software, platform, Oracle software, and non-Oracle software excluding the Oracle Database. For management of the Oracle Database or to extend these features and functions to the Oracle Database, you must purchase the Database Lifecycle Management Pack for Oracle Database.
		The following are the licensed pages, links, features and functions that can be use with an existing Configuration Management Pack for Applications License:
		Configuration Search
		<ul> <li>From the Enterprise menu, select Configuration and Search. All features, functions, links, buttons and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Configuration Instance Browser
		<ul> <li>From the Targets menu, select All Targets, and then select a target, excluding Oracle Database. From the Target home page, select the drop-down under the Target Type then select Configuration. All features, functions, links, buttons and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Configuration History
		<ul> <li>From the Enterprise menu, select Configuration and History. All features, functions, links, buttons and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Configuration Compare
		<ul> <li>From the Enterprise menu, select Configuration and Compare. All features, functions, links, buttons and drill-down on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		File Synchronization
		When viewing comparison results differences as described in the Configuration Compare feature, calent the configuration.



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management	Licensed Links	Configuration Topology
Pack for Applications	(continued)	<ul> <li>From the target home page, select the drop-down under the Target Type and Configuration, Topology. In the View drop- down, Used By is licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		<ul> <li>From the target home page, select the drop-down under the Target Type and Configuration, Topology and Customization. All features, functions, links, buttons and drill- downs on this page are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Configuration Save
		<ul> <li>From the Enterprise menu, select Configuration and Save.</li> <li>All features, functions, links, buttons, and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Configuration Collection Extensibility
		<ul> <li>From the Enterprise menu, select Configuration and Custom. All features, functions, links, buttons, and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Compliance
		<ul> <li>From the Enterprise menu, select Compliance. All features, functions, links, buttons, and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		Real-time Configuration Change Detection
		<ul> <li>From the Enterprise menu, select Compliance. All features, functions, links, buttons, and drill-downs on this page, excluding features and functions that apply to the Oracle Database, are licensed as part of the Configuration Management Pack for Applications.</li> </ul>
		User Defined Deployment Procedures (UDDP)
		<ul> <li>From the Enterprise menu, select Provisioning and Patching, and then select Procedure Library. On the Provisioning Library page, from the list of actions, the Create New option is licensed as part of the Configuration Management Pack for Applications.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Licensed CLI Verbs	The following Enterprise Manager Command Line Interface (CLI) verbs are licensed as part of the Configuration Management Pack for Applications:
		confirm_instance  describe_instance  describe_procedure_input  get_executions  get_instance_data  get_instance_status  get_instances  get_procedure_types  get_procedure_xml  get_procedures  get_retry_argument  ignore_instance  reschedule_instance  resume_instance  save_procedure  stop_instance  submit_procedure  suspend_instance  update_and_retry_step  update_procedure_input
Configuration Management Pack for Applications	Licensed Reports	The following reports are part of the Configuration Management Pack for Applications. All reports, excluding reports associated with, or for the Oracle Database, are licensed as part of this pack.
		To access the reports, go to the <b>Enterprise Manager</b> home page, and from the <b>Enterprise</b> menu, select <b>Reports</b> , and then select <b>Information Publisher Reports</b> . If you have Oracle Analytics Server installed and configured with Oracle Enterprise Manager along with the out-of-the-box reports, go to Oracle Analytics Server.
	Info	The following reporting areas, reports, and sub-reports under <b>Information Publisher Reports</b> are licensed as part of the Configuration Management Pack for Applications:
		Compliance
		<ul> <li>Configuration         The following reporting areas, reports, and sub-reports under your independently configured Oracle Analytics Server installation are licensed as part of the Configuration Management Pack for Applications:     </li> </ul>
		Compliance
		<ul> <li>Configuration</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Licensed Configuration Repository Views	The following Configuration repository views are part of the Configuration Management Pack for Applications:
		MGMT\$CCS_DATA_SOURCE MGMT\$CCS_DATA_SOURCE_VISIBLE MGMT\$CCS_DATA_VISIBLE MGMT\$CS_ASM_DISKGRP_SETTINGS MGMT\$CS_DB_CONTROL_FILE_COUNT MGMT\$CS_DB_INIT_PARAMS MGMT\$CS_DB_RBS_IN_SYSTEM MGMT\$CS_DB_REC_SEG_SETTINGS MGMT\$CS_DB_REC_TS_SETTINGS MGMT\$CS_DB_REC_USER_SETTINGS MGMT\$CS_DB_REC_USER_SETTINGS MGMT\$CS_DB_REC_USER_SETTINGS MGMT\$CS_DB_REDO_LOG_COUNT MGMT\$CS_DB_REDO_LOGS MGMT\$CS_DB_TABLESPACES MGMT\$CS_DB_TABLESPACES MGMT\$CS_DB_TBSP_SEGSPACE_MGMT MGMT\$CS_FEATURE_USAGE MGMT\$CS_FEATURE_USAGE MGMT\$CS_HA_INFO MGMT\$ECM_CURRENT_SNAPSHOTS MGMT\$ECM_VISIBLE_SNAPSHOTS MGMT\$HW_IO_DEVICES MGMT\$HW_IO_DEVICES MGMT\$HW_NIC_BONDS MGMT\$J2EEAPP_JETWS MGMT\$J2EEAPP_JRFWS MGMT\$J2EEAPP_JRFWS MGMT\$J2EEAPP_JRFWS MGMT\$J2EEAPP_JRFWS MGMT\$J2EEAPP_JRFWSPORT MGMT\$J2EEAPP_JRFWSPORT MGMT\$J2EEAPP_WEBAPPCOMPONENT MGMT\$J2EEAPP_WEBAPPCOMPONENT MGMT\$J2EEAPP_WEBAPPCOMPONENT



Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Licensed Oracle Home Patching Repository	The following Oracle Home Patching repository views are part of the Configuration Management Pack for Applications:
	Views	MGMT\$OH_CLONE_PROPERTIES MGMT\$OH_COMPONENT MGMT\$OH_COMP_DEP_RULE MGMT\$OH_COMP_INST_TYPE MGMT\$OH_CRS_NODES MGMT\$OH_DEP_HOMES MGMT\$OH_FILE MGMT\$OH_HOME_INFO MGMT\$OH_INSTALLED_TARGETS MGMT\$OH_INV_SUMMARY MGMT\$OH_PATCH MGMT\$OH_PATCHED_COMPONENT MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHED_FILE MGMT\$OH_PATCHSET MGMT\$OH_PATCH_FIXED_BUG MGMT\$OH_VERSIONED_PATCHV_MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED_MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_EST MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHES
Configuration Management Pack for Applications	Licensed Compliance Repository Views	The following Compliance repository views are part of the Configuration Management Pack for Applications:
		MGMT\$COMPLIANCE_STANDARD_RULE MGMT\$COMPLIANCE_STANDARD MGMT\$COMPLIANCE_STANDARD_GROUP MGMT\$CS_EVAL_SUMMARY MGMT\$COMPOSITE_CS_EVAL_SUMMARY MGMT\$CS_ASM_DISKGRP_SETTINGS MGMT\$CS_DB_CONTROL_FILE_COUNT MGMT\$CS_DB_INIT_PARAMS MGMT\$CS_DB_RES_IN_SYSTEM MGMT\$CS_DB_REC_TS_SETTINGS MGMT\$CS_DB_REC_TS_SETTINGS MGMT\$CS_DB_REC_USER_SETTINGS MGMT\$CS_DB_REC_USER_SETTINGS MGMT\$CS_DB_REDO_LOG_COUNT MGMT\$CS_DB_REDO_LOG_COUNT MGMT\$CS_DB_TABLESPACES MGMT\$CS_DB_TABLESPACES MGMT\$CS_DB_TBSP_SEGSPACE_MGMT MGMT\$CS_FEATURE_USAGE MGMT\$CS_FEATURE_USAGE MGMT\$CS_GROUP_EVAL_SUMMARY MGMT\$CS_RULE_EVAL_SUMMARY MGMT\$CS_TARGET_ASSOC MGMT\$CCC_ALL_OBS_BUNDLES MGMT\$CCC_DIAG_ANALYTICS MGMT\$CCC_DIAG_QUEUEBACKLOG

Management Pack	Type of Licensing Information	Licensing Information
Configuration Management Pack for Applications	Licensed Client Configuration	The following Client Configuration repository views are part of the Configuration Management Pack for Applications:
	Repository Views	MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_NICS MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CCM_CONFIG_HISTORY
Configuration Management Pack for Applications	Previous Configuration Management Packs	<ul> <li>If you have an older Configuration Management pack including:</li> <li>Configuration Management Pack</li> <li>Configuration Management Pack for Oracle Middleware</li> <li>Configuration Management Pack for Non-Oracle Systems</li> <li>You may use all of the features licensed as part of the</li> <li>Configuration Management Pack for Applications only against the previously licensed targets except for the following:</li> <li>Application Configuration Console</li> <li>Configuration Collection Extensibility</li> <li>Creating a custom Comparison Template</li> <li>Using a Comparison Template as part of a Configuration Comparison specification</li> </ul>

## Management Pack for Non-Oracle Middleware

This pack improves the availability and performance of Java applications with low overhead deployed on Non-Oracle Middleware (such as, IBM WebSphere Application Server, JBoss Application Server, and Apache Tomcat), and provides in-depth diagnostics.



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for non- Oracle Middleware	Components	The Management Pack for Non-Oracle Middleware includes the following components:
		<ul> <li>Enterprise Manager system monitoring functionality for IBM WebSphere Application Server, JBoss Application Server, and Apache Tomcat.</li> <li>Enterprise Manager monitoring plug-ins for Microsoft Internet Information Services.</li> <li>Oracle Support Document 2117445.1 (EM 13.x: Java and OS platform support for JVM Diagnostics (JVMD) Agent in Cloud Control) can be found at:</li> </ul>
		<ul> <li>https://support.oracle.com/rs?type=doc&amp;id=2117445.1</li> <li>Java Mission Control (JMC), which is applicable for Application Servers and standalone Java applications.</li> <li>Configuration Management: track inventory, configuration drift and detailed configuration search (excluding all versions of JBoss AS and JBoss EAP).</li> <li>Configuration extensions collect details about targets then the Configuration Management features are licensable.</li> </ul>
		<ul> <li>Note:</li> <li>Configuration Management features do not apply to JBoss Application Server nor JBoss Enterprise Application Platform.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Management Pack for non- Oracle Middleware	Features	The Management Pack for Non-Oracle Middleware includes the following features:
		<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Configuration Collection Extensibility to create custom configuration collections and extend current collections</li> </ul>
		<ul> <li>Configuration Compare, one-to-one and one-to-many (excluding all versions of JBoss AS and JBoss EAP).</li> </ul>
		<ul> <li>Configuration History to report on configuration or relations changes during a specific time frame (excluding all versions of JBoss AS and JBoss EAP).</li> </ul>
		<ul> <li>Configuration Instance Browser to view configuration items and associations associated with a target (excluding all versions of JBoss AS and JBoss EAP).</li> </ul>
		<ul> <li>Configuration Save for reference, baselines, or Gold Standards (excluding all versions of JBoss AS and JBoss EAP).</li> </ul>
		<ul> <li>Configuration Search on a specific target or across relationships (excluding all versions of JBoss AS and JBoss EAP).</li> </ul>
		Configuration Topology of a specified target and its dependencies along with other targets that are dependent on it (excluding all versions of JBoss AS and JBoss EAP).  • Management Connectors, such as ticketing connectors
		and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.
		<ul> <li>Memory leak detection and analysis in production environments.</li> </ul>
		<ul> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> </ul>
		Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures,</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.
Management Pack for non- Oracle Middleware	Features	<ul> <li>Performance monitoring provides real-time and historical performance monitoring.</li> </ul>
		<ul> <li>Real-time monitoring of JVM provides a summary view of resource bottlenecks affecting performance, such as the database, I/O, CPU, and locks.</li> </ul>
		<ul> <li>Trace in-flight transactions to view request performance problems in real time. Analyze time spent in each resource bottleneck (extend to each Java method).</li> </ul>
		<ul> <li>User Defined Deployment Procedures (UDDP) to automate custom processes by creating a procedure from the start by inserting the required phases, steps, and variables.</li> </ul>
Management Pack for non- Oracle Middleware	Restricted-Use License	Management Pack for Non-Oracle Middleware includes the full capabilities of Enterprise Manager Cloud Control Service Level Management.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.

# System Monitoring Plug-ins for Non-Oracle Middleware

The Enterprise Manager System Monitoring Plug-ins for Non-Oracle Middleware provide performance and availability data collection, real-time and historical monitoring, event management/monitoring, notifications, and reporting for Non-Oracle Middleware.

System Monitoring Plug-in	Type of Licensing Information	Licensing Information
Apache HTTP Server	Documentation Resources	See Discovering and Monitoring Apache HTTP Server in Enterprise Manager Cloud Control Middleware Management Guide.



System Monitoring Plug-in	Type of Licensing Information	Licensing Information
Apache HTTP Server	Features	The following features are available for Apache HTTP Server management:  Real-time and historical availability monitoring  Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.  Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.  Metric Extensions to create new metrics to monitor conditions specific to customer environments.  Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.  Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets fo standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCL Availability and event reports  Repository tables and views that store or expose the above data  Configuration Management: Configuration Collection Extensibility, Configuration Compare (not including the use of Comparison Templates), Configuration History, Configuration Instance Browser, Configuration Save, and Configuration Search



System Monitoring Plug-in	Type of Licensing Information	Licensing Information
Apache HTTP Server	General Monitoring Licensed Links	The following list of links and navigation to them correspond with managing Apache HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the System Monitoring Plug-in for Non-Oracle Middleware.
		Home page
		<ul> <li>From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page,</li> </ul>

#### **Create Blackout**

all links are licensed.

- From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page, then select Blackout. All links, menu items, tabs, and sections on this page are licensed.
- From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page, then select the Target menu, then Control, and finally Create Blackout. All links, menu items, tabs, and sections on this page are licensed

#### **End Blackout**

- From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page, then select End Blackout. All links, menu items, tabs, and sections on this page are licensed.
- From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page, then select the Target menu, then Control, and finally End Blackout. All links, menu items, tabs, and sections on this page are licensed.

#### **All Metrics**

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Monitoring, and finally All Metrics. All links, menu items, tabs, and sections on this page are licensed.

#### **Status History**

From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Monitoring, and finally Status History. All links, menu items, tabs, and sections on this page are licensed.

### **Alert History**



### System Monitoring Plug-in Type of Licensing Information

### **Licensing Information**

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Monitoring, and finally Alert History. All links, menu items, tabs, and sections on this page are licensed.

### **Blackouts**

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Monitoring, and finally Blackouts. All links, menu items, tabs, and sections on this page are licensed.



System Monitoring Plug-in	Type of Licensing Information	Licensing Information
Apache HTTP Server	Configuration Management Licensed Links	The following list of links and navigation to them correspond with managing Apache HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the System Monitoring Plug-in for Non-Oracle Middleware.
		Last Collected
		<ul> <li>From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page</li> </ul>

### Compare

on this page are licensed.

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Configuration, and finally Compare. All links, menu items, tabs, and sections on this page are licensed.

select the **Target** menu, then **Configuration**, and finally **Last Collected**. All links, menu items, tabs, and sections

#### Search

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Configuration, and finally Search. All links, menu items, tabs, and sections on this page are licensed.

### History

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Configuration, and finally History. All links, menu items, tabs, and sections on this page are licensed.

#### Save...

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Configuration, and finally Save.... All links, menu items, tabs, and sections on this page are licensed.

### Saved

 From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Configuration, and finally Saved. All links, menu items, tabs, and sections on this page are licensed.

#### **Topology**

From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all

System Monitoring Plug-in	Type of Licensing Information	Licensing Information
		Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the <b>Target</b> menu, then <b>Configuration</b> , and finally <b>Topology</b> . All links, menu items, tabs, and sections on this page are licensed.
•	Compliance Management Licensed Links	The following list of links and navigation to them correspond with managing Apache HTTP Server in Oracle Enterprise Manager Cloud Control 13c and are licensed as part of the System Monitoring Plug-in for Non-Oracle Middleware.
		Results
		<ul> <li>From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Compliance, and finally Results. All links, menu items, tabs, and sections on this page are licensed.</li> </ul>
		Standard Associations
		<ul> <li>From the Targets menu, select All Targets and then select Apache HTTP Server target type to display all Apache HTTP Server targets. Select an Apache HTTP Server target to navigate to its home page. On this page, select the Target menu, then Compliance, and finally Standard Associations. All links, menu items, tabs, and sections on this page are licensed.</li> </ul>

## System Monitoring Plug-ins for Non-Oracle Databases

The following plug-ins for non-Oracle databases are available:

- Oracle System Monitoring Plug-in for Microsoft SQL Server
- Oracle System Monitoring Plug-in for IBM DB2
- Oracle System Monitoring Plug-in for Sybase Adaptive Server Enterprise (ASE)

For information on licensing Oracle Enterprise Manager for MySQL, see Oracle Enterprise Manager for MySQL.



<ul> <li>The following features are available for these plug-ins:</li> <li>Performance monitoring and trending</li> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with</li> </ul>
other management systems. Ticketing connectors open
help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.  Metric alert management: metric history and associated
drill-downs, alert history and associated drill-downs, event history and associated drill-downs.  Metric Extensions to create new metrics to monitor
conditions specific to customer environments.  Notifications that define and use different notification
methods including e-mail, OS scripts, PL/SQL procedures SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.
<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI</li> </ul>
<ul> <li>Performance and event reports</li> <li>Configuration Management: Configuration Collection Extensibility for licensed target types, Configuration Compare (not including the use of Comparison Templates), Configuration History, Configuration Instance Browser, Configuration Save, and Configuration Search for licensed target types.</li> </ul>
<ul> <li>Repository tables/views that store/expose the above data</li> <li>User Defined Deployment Procedures (UDDP): Automate custom processes by creating a procedure from the start by inserting the required phases, steps, and variables.</li> </ul>
<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> <li>To use these features, you must license the System Monitoring</li> </ul>



System Monitoring Plug-in	Type of Licensing Information	Licensing Information
System Monitoring Plug-ins for non-Oracle Database	Licensed Links	The list that follows itemizes the links that require licensing of the plug-ins. You can navigate to these features in several ways. The list that follows assumes that you begin from the main Enterprise Manager Cloud Control home page.
		In the upper right corner of the page, click <b>Setup</b> , then select <b>Add Target</b> , and finally <b>Add Targets Manually</b> . On this page, select the <b>Add Non-Host Targets by Specifying Target Monitoring Properties</b> option. The following selections from the Target Type drop-down menu are licensed features of the System Monitoring Plug-in for Non-Oracle Databases:
		Microsoft SQL Server
		IBM DB2 Database     Advanting Common Enterprise
		Sybase Adaptive Server Enterprise
System Monitoring Plug-ins for non-Oracle Database	Licensed CLI Verbs	The following command line interface (CLI) verb is licensed as part of the System Monitoring Plug-in for Non-Oracle Databases:
		• add_target
		The internal names to be used with the add_target verb are:
		<ul> <li>microsoft_sqlserver_database</li> </ul>
		• ibm_db2_database
		• sybase_ase

# Oracle Enterprise Manager for MySQL

Oracle Enterprise Manager for MySQL is included with MySQL Enterprise Edition and MySQL Cluster Carrier Grade Edition.



To use Oracle Enterprise Manager for MySQL with MySQL Community Edition, you must purchase licensing for MySQL Enterprise Edition or MySQL Cluster Carrier Grade Edition.

7

#### Packaged Application Management

This chapter describes the licensed features and access points of the Application products available for Oracle Enterprise Manager. The following management packs are included:

- Application Management Suite for Siebel
- Application Management Pack for Fusion Applications
- Application Management Suite for Fusion Applications
- Application Management Suite for Oracle E-Business Suite
- Application Management Suite for JD Edwards EnterpriseOne
- Application Management Suite for PeopleSoft Enterprise

#### **Application Management Suite for Siebel**

This product offers comprehensive application management capabilities that help IT organizations simplify the administration and monitoring of their Siebel Enterprise environments. The Application Management Suite for Siebel is composed of the following physical components:

- Siebel Plug-in (built into Enterprise Manager Cloud Control 13c)
- Oracle Real User Experience Insight (RUEI)

Siebel Diagnostic Tool, a standalone utility released with the Siebel Media Pack since Siebel 8.0, is licensed as part of Oracle Application Management Suite for Siebel. All features and capabilities of this tool require the Oracle Application Management Suite for Siebel license.

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Restricted-Use License	The management suite contains a restricted use license of RUEI for use against the core Siebel application. The management suite also includes a restricted use license of Siebel Test Automation (STA) for running synthetic transaction monitoring scripts. The STA license does not cover the use of test automation tools to perform neither functional nor load tests against the Siebel application.

Application Management F	nformation	Licensing Information
Suite for Siebel	Features	The Application Management Suite for Siebel includes the following features:
Suite for Siebel		<ul> <li>following features:</li> <li>Automatic discovery of Siebel components. Create system and services targets with all of the associated infrastructure components</li> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Configuration management to track configuration parameters, take configuration snapshots, and compare configurations</li> <li>Event log analysis to find relevant log files to troubleshoot problems faster.</li> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> <li>Monitoring and diagnostics receive real-time metrics, historical data, and alerts. Examine log files and analyze SARM data.</li> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> <li>Notification</li></ul>



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>Workflow process and policy monitoring identify the first indication of problems before they cause major disruptions to business processing.</li> </ul>
Application Management Suite for Siebel	Support for Real User Monitoring	Application Management Suite for Siebel's Real User Monitoring provides an out-of-the-box real-user monitoring solution for Siebel applications that automatically discovers Siebel applications and translates network objects to business functions, thereby allowing measurement and monitoring of real-user transactions — from clicks to views into business transactions.
		Each individual user action is automatically matched to the correct screen, applet, or view to provide contextual analyses. This state-of-the-art monitoring solution captures and reports all functional errors, discovers end-user performance issues, and discovers Siebel application issues. Application managers can set up Key Performance Indicators (KPIs) and report views of interest of their critical packaged applications.
		All the capabilities for Oracle Real User Experience Insight as documented in End-User Monitoring are available as part of the Application Management Suite for Siebel license. However, the restricted license for Real User Experience Insight only allows RUEI to be used for monitoring Siebel applications developed using the Siebel Smart Client High Interactivity (HI), Standard Interactivity (SI), or ADF framework for Siebel self-service applications. Customers who want to use Real User Experience Insight to monitor other applications need to obtain a full use license of the product.
		Features
		<ul> <li>Provides an out-of-the-box real-user monitoring solution for Siebel applications.</li> </ul>
		<ul> <li>Provides out-of-box translation and reporting of error messages in the user's window.</li> </ul>
		<ul> <li>Enables application managers to set up KPIs for critical packaged applications.</li> </ul>
		<ul> <li>Enables specification and monitoring of real-user business transactions.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Licensed Links	The following information describes the Enterprise Manager links that require licensing of the Application Management Suite for Siebel.
		Siebel System Targets page
		<ul> <li>From the Targets menu, select Siebel. Select Enterprise from the View drop-down list. This page is a licensed feature of the Application Management Suite for Siebel.</li> <li>Add Siebel Enterprise page</li> </ul>
		<ul> <li>From the Targets menu, select Siebel. Select Enterprise from the View drop-down list. From the Siebel System Targets page, click Add Siebel Enterprise. This page an all subsequent pages within the process are licensed features.</li> </ul>
		Siebel Enterprise Home
		<ul> <li>From the Targets menu, select Siebel. Select Enterpris from the View drop-down list. From the Siebel System Targets page, select a link for a Siebel Enterprise. This page and all subsequent pages accessed through the Home Page are licensed features.</li> </ul>
		Siebel Server Home
		<ul> <li>From the Targets menu, select Siebel. Select Enterpris from the View drop-down list. From the Siebel System Targets page, select a link for a Siebel Server. This page and all subsequent pages accessed through the Home Page are licensed features.</li> </ul>
		Siebel Enterprise resultant page
		<ul> <li>From the Targets menu, select Systems. On the System page, click the link in the Name column for a system with Type of Siebel Enterprise. The resultant page contents are licensed features.</li> </ul>
		Siebel Gateway Server Home Page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, click Siebel Gateway Server under Applications. The resultant page contents are licensed features.</li> </ul>
		Siebel Component Page
		<ul> <li>From the Targets menu, select All Targets. On the All Targets page, click Siebel Component under Applications. The resultant page contents are licensed footures.</li> </ul>

features.

features.

**Siebel Database Repository Page** 

From the **Targets** menu, select **All Targets**. On the All Targets page, click **Siebel Database Repository** under Applications. The resultant page contents are licensed



**ORACLE** 

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Support for Service Level Management (SLM)	Features associated with Enterprise Manager Cloud Control Service Level Management (SLM) are also licensed as part of the Oracle Application Management Suite for Siebel. These SLM features are restricted for use with Siebel applications and only for the CPUs licensed. They cannot be used for extensions to Siebel. Extensions include but are not limited to custom forms, JSPs, Java/J2EE code, and integrations using BPEL.
		SLM actively monitors and reports on the availability and performance of services, including end-user business functions, applications, and infrastructure components. In addition, SLM assesses the business impact of any service problem or failure and indicates whether service-level goals have been met.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.
Application Management Suite for Siebel	SLM Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of Service Level Management within the Application Management Suite for Siebel:
		<pre>emcli apply_template_tests emcli create_service emcli add_target</pre>
Application Management Support for Configuration Management  Support for Configuration Management		Configuration management automates the process of managing host software and hardware configurations and deployments. The configuration management features that are licensed as part of the Oracle Application Management Suite for Siebel provides capabilities such as search and compare across all systems, configuration monitoring, policy management and compliance support, security configuration scoring and dashboards, and comprehensive reporting for Siebel-specific software components, which include:  Siebel Enterprise  Siebel Server  Siebel Component Group
		<ul><li>Siebel Required Component Group</li><li>Siebel Functional Component Group</li><li>Siebel Database Repository</li><li>Siebel Gateway Server</li></ul>
		<ul><li>Siebel Application Service (HI)</li><li>Siebel Application Service (SI)</li></ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Configuration Management Features	Configuration Management features of the Application Management Suite for Siebel enable users to:
		<ul> <li>View and analyze configuration</li> <li>View and analyze deployments/installations</li> <li>Search configuration</li> <li>Compare configuration</li> <li>Manage policies, including policy notifications</li> <li>Provide configuration reports</li> <li>Provide repository tables/views that store/expose configuration data</li> <li>Application Management Suite for Siebel provides comprehensive configuration management capabilities for operating system targets and Siebel application targets as specified above.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Configuration Management Licensed Links	The following licensed pages and links of this product apply to Siebel-specific targets within Enterprise Manager. These targets include Siebel Enterprise, Siebel Server, Siebel Component Group, Siebel Component, Siebel Required Component Group, Siebel Functional Component Group, Siebel Database Repository, Siebel Gateway Server, Siebel Application Service (HI), and Siebel Application Service (SI).
		All Targets Policy Violations links
		<ul> <li>From the Enterprise Summary page, all links in the All Targets Policy Violations section are licensed.</li> </ul>
		Hardware and Operating System related information
		<ul> <li>From the Enterprise Summary page, all Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		<ul> <li>From the Groups home page, click the Administration tab. All Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		Security Policy Violations links
		<ul> <li>From the Enterprise Summary page, all links in the Security Policy Violations section are licensed.</li> </ul>
		Configuration section links
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in the Configuration section are licensed.</li> </ul>
		Client Configuration section links
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in the Client Configuration section are licensed</li> </ul>
		Policy Violation page links
		<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Policies. On the Policy Violations page, all links, sub-navigation tabs, and features available on or linked to from the Cloud Control Policies Violations page for information related to hosts are licensed.</li> </ul>
		Security at a Glance host links
		<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Security at a Glance. On the Security at a Glance page, all links related to information on the host are licensed.</li> </ul>
		Policy Violations link and Compliance Score (%)
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page these links are licensed.</li> </ul>
		Configuration section links, Policy Violations section links, Security section links, Deployments link, and Metric and Policy Settings link (Related Links)
		From the Heats were allely and We heat 1 P. J. W.



From the Hosts page, click a specific host to display the **Host Home** page. These links are licensed.

Management Pack	Type of Licensing Information	Licensing Information
Application Management Configuration Manage	Configuration Management Licensed Links (continued)	<ul> <li>Configuration page</li> <li>From the Host page, click the Configuration tab. All features, links, and information on the page are licensed.</li> <li>Policy Violations link</li> <li>From the Targets menu, select Systems. On the Systems page, this link is licensed.</li> <li>From the Targets menu, select Groups. On the Groups page, this link is licensed.</li> <li>Configuration Changes, Policy Violations, Security Policy Violations sections</li> <li>From the Targets menu, select Groups. Select a group.</li> </ul>
		On the Group Home page, all links in these sections are licensed.  Configuration Searches for host and operating system  From the Groups home page, click the Administration tab. This feature is licensed.  Policy Violations column  From the Groups home page, click the Members tab. All links and information in this column is licensed
Application Management Configuration Manager Suite for Siebel Licensed Reports	Configuration Management Licensed Reports	The following reports are part of the licensed features of Configuration Management within the Application Management Suite for Siebel. All reports in each of these sections are features of Configuration Management within the Application Management Suite for Siebel. To display the Report Definitions page, click the Reports menu on the Enterprise Summary home page.  • All reports under Deployment and Configuration • Monitoring reports:  Alerts and Policy Violations Disabled Policies
		• Security Policy Overview



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Configuration Management Licensed Policy Repository Views	The following policy repository views are licensed features of Configuration Management within the Application Management Suite for Siebel:
		Policy Definition Views
		<pre>mgmt\$policies mgmt\$policy_parameters mgmt\$policy_violation_ctxt mgmt\$policy_viol_annotations mgmt\$policy_viol_notif_log</pre>
		Policy Association Views
		<pre>mgmt\$target_policies mgmt\$target_policy_settings mgmt\$target_policy_eval_sum mgmt\$target_compliance_score</pre>
		Policy Violation Views
		<pre>mgmt\$policy_violation_current mgmt\$policy_violation_history mgmt\$policy_violation_context</pre>
Suite for Siebel Licensed Patchi	Configuration Management Licensed Patching Repository Views	The following patching repository views are licensed features of Configuration Management within the Application Management Suite for Siebel:
		Linux Patching
		MGMT\$HOSTPATCH_HOSTS MGMT\$HOSTPATCH_GROUPS MGMT\$HOSTPATCH_GRP_COMPL_HIST MGMT\$HOSTPATCH_HOST_COMPL
		Oracle Home Patching
		MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Configuration Management Licensed Security Repository Views	The following security repository views are licensed features of Configuration Management within the Application Management Suite for Siebel:
		MGMT\$ESA_ALL_PRIVS_REPORT  MGMT\$ESA_ANY_DICT_REPORT  MGMT\$ESA_ANY_PRIV_REPORT  MGMT\$ESA_AUDIT_SYSTEM_REPORT  MGMT\$ESA_BECOME_USER_REPORT  MGMT\$ESA_CATALOG_REPORT  MGMT\$ESA_CONN_PRIV_REPORT  MGMT\$ESA_CREATE_PRIV_REPORT  MGMT\$ESA_DBA_GROUP_REPORT  MGMT\$ESA_DBA_ROLE_REPORT  MGMT\$ESA_DIRECT_PRIV_REPORT  MGMT\$ESA_EXMPT_ACCESS_REPORT  MGMT\$ESA_EXMPT_ACCESS_REPORT  MGMT\$ESA_OH_OWNERSHIP_REPORT  MGMT\$ESA_OH_PERMISSION_REPORT  MGMT\$ESA_POWER_PRIV_REPORT  MGMT\$ESA_PUB_PRIV_REPORT  MGMT\$ESA_PUB_PRIV_REPORT  MGMT\$ESA_TABSP_OWNERS_REPORT  MGMT\$ESA_WITH_ADMIN_REPORT  MGMT\$ESA_WITH_ADMIN_REPORT



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Siebel	Configuration Management Licensed Configuration Repository Views	The following configuration repository views are licensed features of Configuration Management within the Application Management Suite for Siebel:
		Configuration Views
		<pre>mgmt\$db_tablespaces mgmt\$db_datafiles mgmt\$db_controlfiles</pre>
		_
		Client Configuration Views
		MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW
		MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CUSTOM
		MGMT\$CSA_HOST_RULES MGMT\$CSA_HOST_CPUS
		MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_NICS
		MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_FILESYSEMS
		MGMT\$ECM_CONFIG_HISTORY MGMT\$ECM_CONFIG_HISTORY_KEY1
		MGMT\$ECM_CONFIG_HISTORY_KEY2 MGMT\$ECM_CONFIG_HISTORY_KEY3 MGMT\$ECM_CONFIG_HISTORY_KEY4
		MGMT\$ECM_CONFIG_HISTORY_KEY5 MGMT\$ECM_CONFIG_HISTORY_KEY6
		MGMT\$HW_NIC MGMT\$OS COMPONENTS
		MGMT\$OS_FS_MOUNT MGMT\$OS_HW_SUMMARY
		MGMT\$OS_PATCHES MGMT\$OS_SUMMARY
		MGMT\$SOFTWARE_COMP_PATCHSET MGMT\$SOFTWARE_COMPONENT_ONEOFF
		MGMT\$SOFTWARE_COMPONENTS MGMT\$SOFTWARE_DEPENDENCIES
		MGMT\$SOFTWARE_HOMES MGMT\$SOFTWARE_ONEOFF_PATCHES
		MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHSETS
Application Management Suite for Siebel	Support for Oracle HTTP Server	You can only use the following pages against Oracle HTTP Servers, which are front ending Siebel applications. You must obtain a full use license of the Oracle Middleware Manageme Pack to manage Oracle HTTP Servers, which are used for other purposes.
		<ul> <li>All pages in Oracle HTTP Server home page and subsequent pages within the process are licensed features of Application Management Suite for Siebel.</li> </ul>

### Application Management Pack for Fusion Applications

This product offers comprehensive application management capabilities that help IT organizations simplify the administration and monitoring of their Fusion Application environments.

Fusion Applications Control, a standalone utility released with the Fusion Applications, is licensed as part of Oracle Application Management Pack for Fusion Applications. All features and capabilities of this tool require the Oracle Application Management Pack for Fusion Applications.



Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Features	The Application Management Pack for Fusion Applications provides features under four different categories:
		<ul> <li>Discovery and Monitoring</li> <li>Applications Performance Management</li> <li>Middleware Management</li> <li>Technical Configuration Management</li> <li>Life Cycle Automation</li> <li>The Application Management Pack for Fusion Applications includes the following features:</li> </ul>
		<ul> <li>Automatic discovery of Fusion applications and underlying Fusion Middleware topology. Create system and services targets with all of the associated infrastructure</li> </ul>
		<ul> <li>components.</li> <li>Backup and recovery of Fusion Applications and related Database configurations. Restore configurations from the backup.</li> </ul>
		<ul> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Configuration management to track configuration parameters, take configuration snapshots, and compare configurations.</li> </ul>
		<ul> <li>Java Diagnostics of the Java problem at the JVM level.</li> <li>Log analysis to find relevant log files to troubleshoot problems faster.</li> </ul>
		<ul> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> </ul>
		<ul> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> </ul>
		<ul> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> </ul>
		<ul> <li>Monitoring to receive real-time metrics, historical data, and alerts for Fusion applications and Fusion Middleware targets.</li> </ul>
		<ul> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> </ul>
		<ul> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> </ul>
		<ul> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> </ul>
Application Management Pack for Fusion Applications	Features (continued)	The Application Management Pack for Fusion Applications includes the following features:
		<ul> <li>Problem Flow Analysis to diagnose and identify the root cause of the Fusion Applications incidents.</li> </ul>
		<ul> <li>Scale Out to create Fusion Applications Instance from an existing Instance or add more WebLogic servers to existing WebLogic clusters.</li> </ul>
		<ul> <li>Service level management to monitor Fusion applications using beacon transactions and service dashboards.</li> </ul>
		<ul> <li>Support Workbench to monitor and analyze the Fusion Applications specific diagnostic incidents and send the diagnostic information to Oracle Support through My Oracle Support (MOS) integration.</li> </ul>
		<ul> <li>Topology Viewer of the Fusion Applications deployment from Configuration and Runtime routing perspective. This also provides high level information about health of various Fusion Application targets.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Licensed Links	The following information describes the Enterprise Manager links that require licensing of the Application Management Pack for Oracle Fusion Applications:
		Fusion Instance page
		<ul> <li>From the Targets menu, select Fusion Applications.</li> <li>This page and all related links in this page are licensed.</li> </ul>
		Add Fusion Instance page
		<ul> <li>From the Targets menu, select Fusion Applications.</li> <li>From the Fusion Instance page, click Add Fusion</li> <li>Instance. This page and all subsequent pages within the process are licensed features.</li> </ul>
		Fusion Instance Home
		<ul> <li>From the Targets menu, select Fusion Applications.         From the Fusion Instance page, select a link for a Fusion Instance. This page and all subsequent pages accessed through the Home Page are licensed features.     </li> <li>Fusion Product Family Home</li> </ul>
		From the Targets menu, select Fusion Applications.
		From the Fusion Instance page, expand any Fusion Instance and click any Fusion Product Family link. This page and all subsequent pages accessed through the Home Page are licensed features.
		Fusion Product Home
		<ul> <li>From the Targets menu, select Fusion Applications.         From the Fusion Instance page, expand any Fusion Instance and click any Fusion Product link. This page and all subsequent pages accessed through the Home Page are licensed features.     </li> </ul>
		Middleware
		<ul> <li>From the Targets menu, select Middleware. Any Oracle Fusion Middleware links related to Fusion Applications deployment are licensed feature of the Application Management Pack for Fusion Applications.</li> </ul>
Application Management Pack for Fusion Applications	Support for Service Level Management (SLM)	Features associated with Enterprise Manager Cloud Control Service Level Management (SLM) are also licensed as part of the Oracle Application Management Pack for Fusion Applications. These SLM features are restricted for use with Fusion applications and only for the CPUs licensed.
		SLM actively monitors and reports on the availability and performance of services, including end-user business functions, applications, and infrastructure components. In addition, SLM assesses the business impact of any service problem or failure and indicates whether service-level goals have been met.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.
Application Management Pack for Fusion Applications	SLM Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of Service Level Management within the Application Management Pack for Fusion Applications:
		<pre>emcli apply_template_tests emcli create_service emcli add target</pre>

Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Support for Middleware Management	The Application Management Pack for Fusion Applications includes many of the capabilities included in WebLogic Server Management Pack Enterprise Edition and SOA Management Pack Enterprise Edition, as described in Oracle Middleware Enterprise Management.
		The use of WebLogic Management Pack Enterprise Edition and SOA Management Pack Enterprise Edition is limited to the management and monitoring of Fusion Applications, and any targets that host or execute Fusion Application components. Customers who want to use either pack to monitor other applications need to obtain a full-use license of the product(s).
		Refer to Oracle Middleware Enterprise Management for a detailed explanation of features, capabilities, and licensed links.
Application Management Pack for Fusion Applications	Support for Configuration Management	Configuration management automates the process of managing host software and hardware configurations and deployments. Application Management Pack for Fusion Applications provides only technology related configuration management support. The configuration management features that are licensed as part of this license provides capabilities such as search and compare across all systems, configuration monitoring, policy management and compliance support, security configuration scoring and dashboards, and comprehensive reporting for Fusion-specific software components, which include:  Oracle Fusion Instance  Oracle Fusion Product Family  Oracle Fusion Product  Oracle Fusion Cluster J2EE Application  Oracle WebLogic Cluster  Oracle WebLogic Cluster  Oracle HTTP Server  Cluster J2EE Application  J2EE Application  Fusion Database Repository  Java Virtual Machine
Application Management Pack for Fusion Applications	Configuration Management Features	Configuration Management features of the Application Management Pack for Fusion Application enable users to:  View and analyze configuration View and analyze deployments/installations Search configuration
		<ul> <li>Compare configuration</li> <li>Manage policies, including policy notifications</li> <li>Provide configuration reports</li> <li>Provide repository tables/views that store/expose configuration data</li> <li>Application Management Pack for Fusion Applications provides comprehensive configuration management capabilities for operating system targets and Fusion application targets as specified above.</li> </ul>

Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Configuration Management Licensed Links	The following licensed pages and links of this product apply to Fusion-specific targets within Enterprise Manager. These targets include Fusion Instance, Fusion Product Family, Fusion Product, Fusion Cluster J2EE Application, Fusion Database Repository, WebLogic Cluster, WebLogic Server, Java Virtual Machine, Cluster J2EE Application and J2EE Application.
		All Targets Policy Violations links
		<ul> <li>From the Enterprise Summary page, all links in the All Targets Policy Violations section are licensed.</li> </ul>
		Hardware and Operating System related information
		<ul> <li>From the Enterprise Summary page, all Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		<ul> <li>From the Groups home page, click the Administration tab. All Hardware and Operating System related information in the Deployment Summary section are licensed.</li> </ul>
		Security Policy Violations links
		<ul> <li>From the Enterprise Summary page, all links in the Security Policy Violations section are licensed.</li> </ul>
		Configuration section links
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in the Configuration section are licensed.</li> </ul>
		Client Configuration section links
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in the Client Configuration section are licensed.</li> </ul>
		Configuration section links, Policy Violations section links, Security section links, Deployments link, and Metric and Policy Settings link (Related Links)
		<ul> <li>From the Hosts page, click a specific host to display the Host Home page. These links are licensed.</li> </ul>
		Policy Violations link
		• From the <b>Targets</b> menu, select <b>Systems</b> . On the Systems page, this link is licensed.
		<ul> <li>From the Enterprise Summary home page, click the Targets menu, then Groups. On the Groups page, this link is licensed.</li> </ul>
		Security at a Glance host links
		<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Security at a Glance. On the Security at a Glance page, all links related to information on the host are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management	Configuration Management Licensed Links (continued)	Policy Violations link and Compliance Score (%)
Pack for Fusion Applications		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, these links are licensed.</li> </ul>
		Configuration page
		<ul> <li>From the Host page, click the Configuration tab. All features, links, and information on the page are licensed.</li> </ul>
		Policy Violation page link
		<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Policies. On the Policy Violations page, all links, sub-navigation tabs, and features available on or linked to from the Cloud Control Policies Violations page for information related to hosts are licensed.</li> </ul>
		Configuration Changes, Policy Violations, Security Policy Violations sections
		<ul> <li>From the Targets menu, select Groups. Select a group.</li> <li>On the Group Home page, all links in these sections are licensed.</li> </ul>
		Configuration Searches for host and operating system
		<ul> <li>From the Groups home page, click the Administration tab. This feature is licensed.</li> </ul>
		Policy Violations column
		<ul> <li>From the Groups home page, click the Members tab. All links and information in this column is licensed.</li> </ul>
Application Management Pack for Fusion Applications	Configuration Management Licensed Reports	The following reports are part of the licensed features of Configuration Management within the Application Managemen Pack for Fusion Applications. All reports in each of these sections are features of Configuration Management within the Application Management Suite for Fusion Applications. To display the Report Definitions page, click the <b>Reports</b> menu on the Enterprise Summary home page.
		All reports under Deployment and Configuration
		Monitoring reports:  Alarta and Balling Violations
		Alerts and Policy Violations
		Disabled Policies
		Security reports:     Security Policy Overview
		Security Policy Overview



Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Configuration Management Licensed Policy Repository Views	The following policy repository views are licensed features of Configuration Management within the Application Management Pack for Fusion Applications:
		Policy Definition Views
		<pre>mgmt\$policies mgmt\$policy_parameters mgmt\$policy_violation_ctxt mgmt\$policy_viol_annotations mgmt\$policy_viol_notif_log</pre>
		Policy Association Views
		<pre>mgmt\$target_policies mgmt\$target_policy_settings mgmt\$target_policy_eval_sum mgmt\$target_compliance_score</pre>
		Policy Violation Views
		<pre>mgmt\$policy_violation_current mgmt\$policy_violation_history mgmt\$policy_violation_context</pre>
Application Management Pack for Fusion Applications	Configuration Management Licensed Patching Repository Views	The following patching repository views are licensed features of Configuration Management within the Application Management Pack for Fusion Applications:
		Linux Patching
		MGMT\$HOSTPATCH_HOSTS MGMT\$HOSTPATCH_GROUPS MGMT\$HOSTPATCH_GRP_COMPL_HIST MGMT\$HOSTPATCH_HOST_COMPL
		Oracle Home Patching
		MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS



Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Configuration Management Licensed Configuration Repository Views	The following configuration repository views are licensed features of Configuration Management within the Application Management Pack for Fusion Applications:
		Configuration Views
		<pre>mgmt\$db_tablespaces mgmt\$db_datafiles mgmt\$db_controlfiles</pre>
		Client Configuration Views
		MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_COUSTOM MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CCM_CONFIG_HISTORY_KEY1 MGMT\$CCM_CONFIG_HISTORY_KEY2 MGMT\$CCM_CONFIG_HISTORY_KEY3 MGMT\$CCM_CONFIG_HISTORY_KEY4 MGMT\$CCM_CONFIG_HISTORY_KEY4 MGMT\$CCM_CONFIG_HISTORY_KEY5 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$COS_FICHES MGMT\$OS_FICHES MGMT\$OS_PATCHES MGMT\$OS_PATCHES MGMT\$OS_PATCHES MGMT\$SOFTWARE_COMPONENT_ONEOFF MGMT\$SOFTWARE_COMPONENTS MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES



Management Pack	Type of Licensing Information	Licensing Information
Application Management Pack for Fusion Applications	Configuration Management Licensed Security Repository Views	The following security repository views are licensed features of Configuration Management within the Application Management Pack for Fusion Applications:
		MGMT\$ESA_ALL_PRIVS_REPORT MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT MGMT\$ESA_CONN_PRIV_REPORT MGMT\$ESA_CREATE_PRIV_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DESA_DESCES_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_EXMPT_REPORT MGMT\$ESA_OH_OWNERSHIP_REPORT MGMT\$ESA_OH_PERMISSION_REPORT MGMT\$ESA_POWER_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_SYS_PUB_PKG_REPORT
		MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_GRANT_REPORT

# **Application Management Suite for Fusion Applications**

The Application Management Suite for Fusion Applications (the "Suite") offers advanced application management capabilities that help IT organizations simplify the administration and monitoring of their Fusion Application environments.

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Fusion Applications	11	The Application Management Suite for Fusion Applications provides the following features, limited to Oracle Fusion Applications environments:
		<ul> <li>Real User Experience Insight (RUEI), with Oracle Fusion Apps accelerator.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Fusion Applications	Support for Real User Experience Insight (RUEI)	Application Management Suite for Fusion Application Real User Monitoring provides an out-of-the-box real-user monitoring solution for Fusion applications that automatically discovers Fusion applications and translates network objects to business functions, thereby allowing measurement and monitoring of real-user transactions — from clicks to views into business transactions.
		Each individual user action is automatically matched to the correct screen, applet, or view to provide contextual analyses. This state-of-the-art monitoring solution captures and reports all functional errors, discovers end-user performance issues, and discovers Fusion Application issues. Application managers can set up Key Performance Indicators (KPIs) and report views of interest of their critical packaged applications.
		All the capabilities for Oracle Real User Experience Insight (RUEI) as documented in End-User Monitoring are available as part of the Application Management Suite for Fusion Applications license. However, the restricted license for Real User Experience Insight only allows RUEI to be used for monitoring Fusion Applications. Customers who want to use Real User Experience Insight to monitor other applications need to obtain a full use license of the product.
Application Management Suite for Fusion Applications	RUEI Features	<ul> <li>Provides an out-of-the-box, real-user monitoring solution for Fusion Applications.</li> <li>Provides out-of-box translation and reporting of error messages in the user's window.</li> <li>Enables application managers to set up KPIs for critical packaged applications.</li> <li>Enables specification and monitoring of real-user business</li> </ul>
Application Management Suite for Fusion Applications	Configuration Management Licensed Reports	transactions.  The following reports are part of the licensed features of Configuration Management within the Application Management Suite for Fusion Applications. All reports in each of these sections are features of Configuration Management within the Application Management Suite for Fusion Applications. To display the Report Definitions page, click the <b>Reports</b> menu on the Enterprise Summary home page.
		<ul> <li>All reports under <b>Deployment and Configuration</b></li> <li>Monitoring reports:</li> </ul>
		Alerts and Policy Violations
		Disabled Policies
		Security reports:
		Security Policy Overview

# Application Management Suite for Oracle E-Business Suite

This product offers capabilities to manage Oracle E-Business Suite environments on Oracle Cloud and/or on-premise including automation for provisioning new environments, lift & shift, backup, restore, and comprehensive change management functions.

The following table lists some of the key features of Application Management suite for Oracle E-Business suite:

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business	Features	The Application Management Suite for Oracle E-Business Suite includes the following features:
	reatures	



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Features (continued)	<ul> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> </ul>
		<ul> <li>Notifications that define and use different notification methods including e-mail, OS scripts, PL/SQL procedures, SNMP traps, Webhooks and Slack. Also includes repeat notifications, use of notification-related actions in incident rule sets, and administrator notification schedules.</li> </ul>
		<ul> <li>Patch Manager to manually or automatically download and deploy patches across single or multiple Oracle E- Business Suite instances from a single console.</li> </ul>
		Real user monitoring on how end users use the
		<ul> <li>application and the experience that is delivered.</li> <li>Service level management of Oracle E-Business Suite applications using beacon transactions and service dashboards.</li> </ul>
		<ul> <li>User Monitoring of database session performance issues for Concurrent Programs requests, Forms sessions, and Oracle Application Framework.</li> </ul>
		<ul> <li>Automated Customization Discovery:</li> </ul>
		<ul> <li>Patch Recommendations for E-Business Suite applications, database and applications tier technology.</li> </ul>
		<ul> <li>Automated patch deployments for applications, database and WLS servers.</li> </ul>
		<ul> <li>Automated Cloning of applications with ability to include database cloning as part of the deployment procedure.</li> </ul>
		<ul> <li>Instance administration to allow adding of managed servers, services and apps tier nodes.</li> </ul>
		<ul> <li>Automation of key processes to enable Cloud deployment, monitoring and management of Oracle E-Business Suite using EMCLI. Following is a list of the key automation in the latest release of Application Management Suite:</li> </ul>
		<ul> <li>Auto discovery of EBS instances.</li> </ul>
		Monitoring of EBS targets.  Automated EBS and Database natab
		<ul> <li>Automated EBS and Database patch recommendations.</li> </ul>
		<ul> <li>Deployment of EBS, Database, and WebLogic patches.</li> </ul>
		<ul> <li>Build and Deploy Custom Packages.</li> </ul>
		<ul> <li>Deploying EBS patches.</li> </ul>
A	Owner and fair D. 111	Creating Custom Packages.  All of the combilities for Combine Book Hard Functions a legislature.
Application Management Suite for Oracle E-Business Suite	Support for Real User Experience Insight (RUEI)	All of the capabilities for Oracle Real User Experience Insight as documented in End-User Monitoring are available as part of the Application Management Suite for Oracle E-Business Suite license. However, the restricted license for Real User Experience Insight only allows RUEI to be used for monitoring Oracle E-Business Suite applications developed using Oracle Forms or the OA Framework. Customers who want to use Real User Experience Insight to monitor other applications need to obtain a full use license of the product.

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	RUEI Features	<ul> <li>Automatically discovers Oracle E-Business Suite modules running both an OA and JTT framework, and Oracle Forms applications.</li> </ul>
		<ul> <li>Provides out-of-box translation and reporting of error messages in the user's window.</li> </ul>
		<ul> <li>Enables application manager to set up Key Performance Indicators (KPIs) to critical packaged applications.</li> </ul>
		<ul> <li>Enables specification and monitoring of real-user business transactions.</li> </ul>
Application Management Suite for Oracle E-Business Suite	Licensed Links	The following information describes the Enterprise Manager links that require licensing of the Application Management Suite for Oracle E-Business Suite:
		All Oracle E-Business Suite Systems page
		<ul> <li>From the Targets menu, select Oracle E-Business Suite This page is licensed.</li> </ul>
		Add All Oracle E-Business Suite Targets page
		<ul> <li>From the Targets menu, select Oracle E-Business Suite From the all Oracle E-Business Suite Systems page, click Add. This page and all subsequent pages within the process are licensed.</li> </ul>
		Oracle E-Business Suite Home Page, Monitoring, Topology pages, Oracle Application Manager, User Monitoring, Start and Stop Services, Service Level Reports, E-Business Suite Dashboard, Configuration, and Compliance
		<ul> <li>From the Targets menu, select Oracle E-Business Suite From the All Oracle E-Business Suite Systems page, select a link for an Oracle E-Business Suite system to drill down to the home page of an Oracle E-Business Suite System. These pages, and subsequent pages associated with drilling down the targets that comprise an E-Business Suite system are licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Systems. On the Systems page, click the link in the Name column for a system with an Oracle E-Business Suite System type. These pages and subsequent pages associated with drilling down the targets that comprise an E-Business Suite system are licensed.</li> </ul>
		Change Approval Request, Patch Manager, and Customization Manager
		<ul> <li>From the Oracle E-Business System page, click a link for Change Management. On the Change Management page, the summary and links to these items are licensed.</li> </ul>
		Oracle E-Business Suite Nodes System Home, Charts, Administration, Components and Topology pages
		<ul> <li>From the Targets menu, select Systems. On the Systems page, click the Name column for a system with an Oracle E-Business Suite Nodes System type. These pages are licensed.</li> </ul>
		Oracle E-Business Suite System Home, Charts, Administration, Components and Topology pages
		<ul> <li>From the Targets menu, select Systems. On the Systems page, click the Name column for a system with an Oracle E-Business Suite System type. These pages are licensed.</li> </ul>

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Support for Service Level Management (SLM)	Features associated with Enterprise Manager Cloud Control Service Level Management (SLM) are also licensed as part of the Oracle Application Management Suite for Oracle E-Business Suite. These SLM features are restricted for use with Oracle E-Business Suite applications and only for the CPUs licensed. They cannot be used for extensions to Oracle E-Business Suite. Extensions include but are not limited to custom forms, JSPs, Java/J2EE code, and integrations using BPEL.
		SLM actively monitors and reports on the availability and performance of services, including end-user business functions, applications, and infrastructure components. Using service tests or synthetic transactions executed from remote user locations (beacons), businesses can monitor services from the end user's perspective and its correlation to the underlying IT infrastructure. In addition, SLM assesses the business impact of any service problem or failure and indicates whether service-level goals have been met.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.
Application Management Suite for Oracle E-Business Suite	SLM Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of Service Level Management within the Application Management Suite for Oracle E-Business Suite:
		<pre>emcli apply_template_tests emcli create_service emcli add_target</pre>
Application Management Suite for Oracle E-Business Suite	Support for Configuration Management	Configuration Management automates the time-consuming and often error-prone process of managing software configurations and deployments. The Configuration Management features that are licensed as part of the Application Management Suite for Oracle E-Business Suite provide capabilities such as search and compare across all systems, configuration monitoring, policy management and compliance support, security configuration scoring and dashboards, and comprehensive reporting for E-Business Suite-specific software components, which include:  Oracle Concurrent Manager  Oracle E-Business Suite
		<ul> <li>Oracle E-Business Suite Custom Objects Definition</li> <li>Oracle E-Business Suite System</li> <li>Oracle E-Business Suite Patch Information Configuration</li> <li>Oracle E-Business Suite Workflow</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business	Features	The Configuration Management features of the Application Management Suite for E-Business Suite enable users to:
Suite		<ul> <li>View and analyze configurations</li> <li>View and analyze deployments and installations</li> <li>Search configurations</li> <li>Compare configurations</li> <li>Provide configuration reports</li> <li>Provide repository tables and views that store and expose configuration data</li> <li>History to view a list of configuration changes made to the target</li> <li>Refresh option to manually refresh the configuration data Application Management Suite for Oracle E-Business Suite includes a limited use license of Application Configuration Console (ACC) and Configuration Change Console (CCC). These two tools can be used against Oracle E-Business Suite application targets as specified above, and operating system targets. Licensing information for ACC and CCC is available in Other Infrastructure Management in the Configuration</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Links	The following licensed pages and links of this pack apply to Oracle E-Business Suite-specific software components within Enterprise Manager. These components include those listed above.
		Note: The features in the Patching and Cloning sections are licensed under the Provisioning and Patch Automation Pack. The Agent Installation features do not require licensing. The security links are shared by the Provisioning and Patch Automation Pack, Database Configuration Pack, Configuration Management Pack for Non-Oracle Systems, Applications Management Pack for Siebel, Application Management Suite for Oracle E-Business Suite, and Configuration Pack for Oracle Middleware.
		All Targets Policy Violations section
		<ul> <li>On the Enterprise Summary home page, all links in this section are licensed.</li> </ul>
		All Oracle E-Business Suite Targets page
		<ul> <li>From the Targets menu, select Oracle Applications.</li> <li>From the all Oracle E-Business Suite Systems page, click Add. This page and all subsequent pages within the process are licensed.</li> </ul>
		Deployment Summary section
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all Hardware and Operating System related information in this section are licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Groups. On the Groups page, click the Administration tab. All Hardware and Operating System related information in this section are licensed.</li> </ul>
		<ul> <li>On the Enterprise Summary home page, all Hardware and Operating System related information in this section are licensed.</li> </ul>
		Security Policy Violations section
		<ul> <li>On the Enterprise Summary home page, all links in this section are licensed.</li> </ul>
		Configuration section
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in this section are licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, all links in this section are licensed.</li> </ul>
		Client Configuration section
		<ul> <li>From the Enterprise Summary home page, click the Deployments menu. On the Deployments page, all links in this section are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management	Policy Violations page
	Licensed Links (continued)	<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Policies. The links associated with this page are grouped in the Violations sub-tab. All links, sub-navigation tabs, and features available on or linked to from the Cloud Control Policies Violations page for information related to hosts are licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, all links in this section are licensed.</li> </ul>
		Security at a Glance
		<ul> <li>From the Enterprise Summary home page, click the Compliance menu, then Security at a Glance. All links related to information on the host are licensed.</li> </ul>
		Policy Violations link and Compliance Score (%)
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, these links are licensed.</li> </ul>
		Security section
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, all links in this section are licensed.</li> </ul>
		Deployments link, Metric and Policy Settings link
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, these links under Related Links are licensed.</li> </ul>
		Configuration page
		<ul> <li>From the Enterprise Summary home page, click the Configurations menu. All features, links, and information on this page are licensed.</li> </ul>
		Policy Violations link
		<ul> <li>From the Targets menu, select Systems. On the System page, this link is licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Groups. On the Groups page, this link is licensed.</li> </ul>
		Configuration Changes, Policy Violations, Security Policy Violations sections
		<ul> <li>From the Targets menu, select Groups. On the Groups page, these sections are licensed.</li> </ul>
		Configuration Searches
		<ul> <li>From the Targets menu, select Groups. On the Groups page, click the Administration tab. This feature is licensed.</li> </ul>
		Policy Violations column
		<ul> <li>From the Targets menu, select Groups. On the Groups page, click the Members tab. All links and information this column are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Reports	The following reports are part of the licensed features of Configuration Management within the Application Management Suite for Oracle E-Business Suite. All reports in each of these sections are features of Configuration Management within the Application Management Suite for Oracle E-Business Suite. To display the Report Definitions page, click the Reports tab on the Enterprise Summary home page.
		All reports under Deployment and Configuration
		<ul> <li>Monitoring reports:</li> <li>Alerts and Policy Violations</li> </ul>
		Disabled Policies
		Security reports:
		Security Policy Overview
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Policy Repository Views	The following policy repository views are licensed features of Configuration Management within the Application Management Suite for Oracle E-Business Suite:
		Policy Definition Views
		<pre>mgmt\$policies mgmt\$policy_parameters mgmt\$policy_violation_ctxt mgmt\$policy_viol_annotations mgmt\$policy_viol_notif_log</pre>
		Policy Association Views
		<pre>mgmt\$target_policies mgmt\$target_policy_settings mgmt\$target_policy_eval_sum mgmt\$target_compliance_score</pre>
		Policy Violation Views
		<pre>mgmt\$policy_violation_current mgmt\$policy_violation_history mgmt\$policy_violation_context</pre>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Patching Repository Views	The following patching repository views are licensed features of Configuration Management within the Application Management Suite for Oracle E-Business Suite:
		Linux Patching
		MGMT\$HOSTPATCH_HOSTS MGMT\$HOSTPATCH_GROUPS MGMT\$HOSTPATCH_GRP_COMPL_HIST MGMT\$HOSTPATCH_HOST_COMPL
		Oracle Home Patching
		MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Configuration Repository Views	The following configuration repository views are licensed features of Configuration Management within the Application Management Suite for Oracle E-Business Suite:
		Configuration Views
		<pre>mgmt\$db_tablespaces mgmt\$db_datafiles mgmt\$db_controlfiles</pre>
		Client Configuration Views
		MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW MGMT\$CSA_HOST_COKIES MGMT\$CSA_HOST_COKIES MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_RULES MGMT\$CSA_HOST_RULES MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_NICS MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_PILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CCA_CONFIG_HISTORY MGMT\$ECM_CONFIG_HISTORY_KEY1 MGMT\$ECM_CONFIG_HISTORY_KEY2 MGMT\$ECM_CONFIG_HISTORY_KEY3 MGMT\$ECM_CONFIG_HISTORY_KEY4 MGMT\$ECM_CONFIG_HISTORY_KEY5 MGMT\$ECM_CONFIG_HISTORY_KEY5 MGMT\$ECM_CONFIG_HISTORY_KEY6 MGMT\$ECM_COMFIG_HISTORY_KEY6 MGMT\$COM_COMFIG_HISTORY_KEY6 MGMT\$COMFIS_HISTORY_KEY6 MGMT\$COMFIS_HISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHISTORY_MCHI



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for Oracle E-Business Suite	Configuration Management Licensed Security Repository Views	The following security repository views are licensed features of Configuration Management within the Application Management Suite for Oracle E-Business Suite:
		MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT MGMT\$ESA_CONN_PRIV_REPORT MGMT\$ESA_CREATE_PRIV_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DIRECT_PRIV_REPORT MGMT\$ESA_DIRECT_PRIV_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_KEY_OBJECTS_REPORT MGMT\$ESA_OH_OWNERSHIP_REPORT MGMT\$ESA_OH_PERMISSION_REPORT MGMT\$ESA_POWER_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_ADMIN_REPORT

### Application Management Suite for JD Edwards EnterpriseOne

This product offers comprehensive application management capabilities that help IT organizations simplify the administration and monitoring of their JD Edwards EnterpriseOne environments. The Application Management Suite for JD Edwards EnterpriseOne is composed of the following physical components:

- JD Edwards EnterpriseOne Plug-in (built into Enterprise Manager Cloud Control 13c).
- Real User Experience Insight (RUEI).

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Restricted-Use License	The management suite contains a restricted use license of RUEI for use against the core JD Edwards EnterpriseOne application.



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards	Features	The Application Management Suite for JD Edwards EnterpriseOne includes the following features:
EnterpriseOne		<ul> <li>Automatic discovery of JD Edwards EnterpriseOne components. Create system and services targets with all of the associated infrastructure components</li> <li>Blackouts to suspend monitoring on targets to support scheduled maintenance periods. This includes the use of Blackouts in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Configuration management to track configuration parameters, take configuration snapshots, and compare configurations</li> <li>Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems.</li> <li>Metric and Alert/Event History. This includes the use of metrics in the Enterprise Manager console, EMCLI and REST APIs.</li> <li>Metric Extensions to create new metrics to monitor conditions specific to customer environments.</li> <li>Monitoring and diagnostics to receive real-time metrics, historical data, and alert notifications. Examine log files for information pertinent to identifying problem root causes.</li> <li>Monitoring Templates encapsulate target monitoring settings and can later be applied against many targets for standardization. This includes the use of Monitoring Templates in the Enterprise Manager console and EMCLI.</li> <li>Dynamic Runbooks enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.</li> <li>Event Compression reduces incidents by correlating and combining related events into a smaller set of incidents.</li> <li>Template Collections (with Administration Groups) automate the deployment of management settings on targets as they join the group. This includes the use of Template Collections in the Enterprise Manager console and EMCLI.</li> <li>Notifications, use of notification-related actions in in</li></ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Support for Real User Experience Insight (REUI) Monitoring	The Application Management Suite for JD Edwards EnterpriseOne's Real User Monitoring provides an out-of-the- box real-user monitoring solution for JD Edwards EnterpriseOne. It automatically discovers JD Edwards EnterpriseOne applications and translates network objects into manageable business services and functions.
		This accelerator supports real-user monitoring of JD Edwards EnterpriseOne application components. Each individual user action is automatically matched to the correlating JD Edwards EnterpriseOne node, site, or view to provide detailed and rich contextual analysis. This monitoring solution captures and reports all functional errors, discovers end-user performance issues, and identifies application issues specific to JD Edwards EnterpriseOne applications. Application managers can set up Key Performance Indicators (KPIs) and report views of interest to their critical packaged applications to gain a complete understanding of their usage, and automatically be alerted in case of KPI events.
		All of the capabilities for Oracle Real User Experience Insight as documented in End-User Monitoring are available as part of the Application Management Suite for JD Edwards EnterpriseOne license. However, the restricted license for Real User Experience Insight only allows RUEI to be used for monitoring JD Edwards EnterpriseOne applications developed using JD Edwards EnterpriseOne Tool Set. Customers who want to use Real User Experience Insight to monitor other applications need to obtain a full use license of the product.
Application Management Suite for JD Edwards EnterpriseOne	REUI Features	<ul> <li>Provides an out-of-the-box real-user monitoring solution for JD Edwards EnterpriseOne applications.</li> <li>Provides out-of-box translation and reporting of error messages in the user's window.</li> <li>Enables application managers to set up KPIs for critical packaged applications.</li> <li>Enables specification and monitoring of real-user business transactions.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	REUI Licensed Links	The following information describes the Enterprise Manager links that require licensing of the Application Management Suite for JD Edwards EnterpriseOne:
		All JD Edwards EnterpriseOne Systems page
		<ul> <li>From Targets menu, select JD Edwards EnterpriseOne.</li> <li>This page is licensed.</li> </ul>
		Add All JD Edwards EnterpriseOne Targets page
		<ul> <li>From the Targets menu, select JD Edwards         EnterpriseOne. From the All JD Edwards EnterpriseOne page, click Add. This page and all subsequent pages within the process are licensed.     </li> </ul>
		JD Edwards EnterpriseOne System Home, Performance, Administration, Maintenance, Diagnostic, User Monitoring and Topology pages
		<ul> <li>From the Targets menu, select JD Edwards         EnterpriseOne. From the All JD Edwards EnterpriseOne         Systems page, select a link for a JD Edwards         EnterpriseOne system to drill down to the home page of         a JD Edwards EnterpriseOne System. These pages and         subsequent pages associated with drilling down the         targets that comprise a JD Edwards EnterpriseOne         system are licensed.</li> <li>From the Targets menu, select Systems. On the Systems         page, click the link in the Name column for a system with         an Oracle E-Business Suite System type. These pages         and subsequent pages associated with drilling down the         targets that comprise an JD Edwards EnterpriseOne         system are licensed</li> </ul>
		JD Edwards EnterpriseOne Nodes System Home, Charts, Administration, Components and Topology pages
		<ul> <li>From the Targets menu, select Systems. On the Systems page, click the Name column for a system with a JD Edwards EnterpriseOne Nodes System type. These pages are licensed.</li> </ul>
		JD Edwards EnterpriseOne System Home, Charts, Administration, Components, Topology and Report pages
		<ul> <li>From the Targets menu, select Systems. On the Systems page, click the Name column for a system with a JD Edwards EnterpriseOne System type. These pages are licensed.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Support for Service Level Management (SLM)	Features associated with Service Level Management (SLM) for JD Edwards EnterpriseOne are also licensed as part of the Application Management Suite for JD Edwards EnterpriseOne. These SLM features are restricted for use with JD Edwards EnterpriseOne applications and only for the CPUs licensed. They cannot be used for extensions to JD Edwards EnterpriseOne. Extensions include but are not limited to custom forms, JSPs, Java/J2EE code, and integrations using BPEL.
		SLM offers a comprehensive monitoring solution that helps IT organizations achieve high availability and performance, and optimized service levels for their business services. SLM actively monitors and reports on the availability and performance of services, including end-user business functions, applications, and infrastructure components. Using service tests or synthetic transactions executed from remote user locations (beacons), businesses can monitor services from the end user's perspective and its correlation to the underlying IT infrastructure. In addition, SLM assesses the business impact of any service problem or failure and indicates whether service-level goals have been met.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.
Application Management Suite for JD Edwards EnterpriseOne	SLM Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of Service Level Management within the Application Management Suite for JD Edwards EnterpriseOne:
		<pre>emcli apply_template_tests emcli create_service emcli add_target</pre>
Application Management Suite for JD Edwards EnterpriseOne	Support for Configuration Management	<ul> <li>JD Edwards EnterpriseOne HTML Server</li> <li>JD Edwards EnterpriseOne Enterprise Server</li> <li>JD Edwards EnterpriseOne Business Services Server</li> <li>JD Edwards EnterpriseOne Server Manager</li> </ul>
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Features	Configuration Management features of the Application Management Suite for JD Edwards EnterpriseOne enable users to:
		<ul> <li>View and analyze configuration</li> <li>View and analyze deployments/installations</li> <li>Search configuration</li> <li>Compare configuration</li> <li>Manage policies, including policy notifications</li> <li>Provide configuration reports</li> <li>Provide repository tables/views that store/expose configuration data</li> </ul>



From the **Targets** menu, select **Hosts**. On the Hosts page, the links in these sections are licensed.

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Links	The following licensed pages and links of this pack apply to for JD Edwards EnterpriseOne-specific targets within Enterprise Manager. These targets include JD Edwards EnterpriseOne HTML Server, JD Edwards EnterpriseOne Business Services Server, JD Edwards EnterpriseOne Business Services Server, and JD Edwards EnterpriseOne Server Manager.
		All Targets Policy Violations section
		<ul> <li>On the Enterprise Summary page, all links in this section are licensed.</li> </ul>
		Deployment Summary section
		<ul> <li>On the Enterprise Summary page, all Hardware and Operating System related information in this section are licensed.</li> </ul>
		<ul> <li>From the Enterprise Summary page, click the Deployments menu. On the Deployments page, all Hardware and Operating System related information in this section are licensed.</li> </ul>
		<ul> <li>From the Targets menu, select Groups. On the Groups home page, click the Administration tab. All Hardware and Operating System related information in this section are licensed.</li> </ul>
		Security Policy Violations section
		<ul> <li>On the Enterprise Summary page, all links in this section are licensed.</li> </ul>
		Configuration section
		<ul> <li>From the Enterprise Summary page, click the Deployments menu. On the Deployments page, all links in this section are licensed.</li> </ul>
		Client Configuration section
		<ul> <li>From the Enterprise Summary page, click the Deployments menu. On the Deployments page, all links in this section are licensed.</li> </ul>
		Violations sub-tab page
		<ul> <li>From the Enterprise Summary page, click the Compliance menu, then Policies. On the Policy Violations page, all links, sub-navigation tabs, and features available on or linked to from the Cloud Control Policies Violations page for information related to hosts are licensed.</li> </ul>
		Security at a Glance page
		<ul> <li>From the Enterprise Summary page, click the Compliance menu, then Security at a Glance. All links related to information on the host are licensed.</li> </ul>
		Policy Violations link and Compliance Score (%)
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, these items are licensed.</li> </ul>
		Configuration, Policy Violations, Security sections



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards	Configuration Management Licensed Links (continued)	Deployments link, Metric and Policy Settings link  • From the Targets menu, select Hosts. On the Hosts page
EnterpriseOne		under Related Links, these links are licensed.
		Configuration page
		<ul> <li>From the Targets menu, select Hosts. On the Hosts page, click Configuration. All features, links, and information on this page are licensed.</li> </ul>
		Policy Violation link
		• From the <b>Targets</b> menu, select <b>Systems</b> . On the Systems page, this link is licensed.
		<ul> <li>From the Targets menu, select Groups. On the Groups page, this link is licensed.</li> </ul>
		Configuration Changes, Policy Violations, Security Policy Violations sections
		<ul> <li>From the Targets menu, select Groups. On the Groups home page, all links in these sections are licensed.</li> </ul>
		Configuration Searches
		<ul> <li>From the Targets menu, select Groups. On the Groups home page, click the Administration tab. For host and operating systems, this feature is licensed.</li> </ul>
		Policy Violations column
		<ul> <li>From the Targets menu, select Groups. On the Groups home page, click the Members tab. All links and information in this column are licensed.</li> </ul>
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Reports	The following reports are part of the licensed features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne. All reports in each of these sections are features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne. To display the Report Definitions page, click the <b>Reports</b> tab on the Cloud Control Home page.
		All reports under Deployment and Configuration
		Monitoring reports:
		Alerts and Policy Violations
		Disabled Policies
		Security reports:
		Security Policy Overview



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Policy Repository Views	The following policy repository views are licensed features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne:
·		Policy Definition Views
		<pre>mgmt\$policies mgmt\$policy_parameters mgmt\$policy_violation_ctxt mgmt\$policy_viol_annotations mgmt\$policy_viol_notif_log</pre>
		Policy Association Views
		<pre>mgmt\$target_policies mgmt\$target_policy_settings mgmt\$target_policy_eval_sum mgmt\$target_compliance_score</pre>
		Policy Violation Views
		<pre>mgmt\$policy_violation_current mgmt\$policy_violation_history mgmt\$policy_violation_context</pre>
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Patching Repository Views	The following patching repository views are licensed features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne:
		Linux Patching
		MGMT\$HOSTPATCH_HOSTS MGMT\$HOSTPATCH_GROUPS MGMT\$HOSTPATCH_GRP_COMPL_HIST MGMT\$HOSTPATCH_HOST_COMPL
		Oracle Home Patching
		MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Configuration Repository Views	The following configuration repository views are licensed features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne:
		Configuration Views
		<pre>mgmt\$db_tablespaces mgmt\$db_datafiles mgmt\$db_controlfiles</pre>
		Client Configuration Views
		MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW MGMT\$CSA_HOST_COOKIES MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_OS_PROPERTIES MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CCA_CONFIG_HISTORY_KEY1 MGMT\$CCM_CONFIG_HISTORY_KEY2 MGMT\$CCM_CONFIG_HISTORY_KEY3 MGMT\$CCM_CONFIG_HISTORY_KEY3 MGMT\$CCM_CONFIG_HISTORY_KEY4 MGMT\$CCM_CONFIG_HISTORY_KEY5 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$COMPONENTS MGMT\$OS_COMPONENTS MGMT\$OS_FS_MOUNT MGMT\$OS_PATCHES MGMT\$OS_PATCHES MGMT\$OS_PATCHES MGMT\$SOFTWARE_COMPONENT_ONEOFF MGMT\$SOFTWARE_COMPONENTS MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_OTHERS MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for JD Edwards EnterpriseOne	Configuration Management Licensed Security Repository Views	The following security repository views are licensed features of Configuration Management within the Application Management Suite for JD Edwards EnterpriseOne:
		MGMT\$ESA_ALL_PRIVS_REPORT MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT MGMT\$ESA_CONN_PRIV_REPORT MGMT\$ESA_CREATE_PRIV_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DIRECT_PRIV_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_OH_OWNERSHIP_REPORT MGMT\$ESA_OH_PERMISSION_REPORT MGMT\$ESA_POWER_PRIV_REPORT MGMT\$ESA_POWER_PRIV_REPORT MGMT\$ESA_POWER_PRIV_REPORT
		MGMT\$ESA_SYS_PUB_PKG_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_GRANT_REPORT

#### Application Management Suite for PeopleSoft Enterprise

This product offers comprehensive applications management capabilities that help IT organizations simplify the administration and monitoring of their PeopleSoft Enterprise environments. By building PeopleSoft management and monitoring on top of Oracle's rich and comprehensive management solution, the Application Management Suite for PeopleSoft Enterprise significantly reduces the cost and complexity of managing PeopleSoft Enterprise environments.

The Application Management Suite for PeopleSoft Enterprise consists of the following physical components:

- PeopleSoft plug-in (built into Enterprise Manager Cloud Control)
- Real User Experience Insight (RUEI)

The following table describes this management pack offered by Enterprise Manager:

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Restricted-Use License	The management suite contains a restricted use license of RUEI for use against the core PeopleSoft application.



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Features	The Application Management Suite for PeopleSoft Enterprise includes the following features:
		Automatic discovery of PeopleSoft Enterprise components. Create a system with all of the associated infrastructure components.  Manifesting and discovering to reaching the problem.
		<ul> <li>Monitoring and diagnostics to receive real-time metrics, Tuxedo queues, and historical data and alert notifications. Examine log files for information pertinent to identifying problem root causes.</li> </ul>
		<ul> <li>Configuration management to track configuration parameters, take configuration snapshots, and compare configurations.</li> </ul>
		<ul> <li>Service level management to monitor PeopleSoft Enterprise applications using beacon transactions and service dashboards.</li> </ul>
		<ul> <li>Administration to start and stop PeopleSoft components, define PeopleSoft domains, and clear cache.</li> </ul>
		<ul> <li>Real user monitoring on how end users use the application and the experience that is delivered.</li> </ul>
Application Management Suite for PeopleSoft Enterprise	Support for Real User Experience Insight (REUI) Monitoring	The Application Management Suite for PeopleSoft Enterprise's Real User Monitoring provides an out-of-the-box real-user monitoring solution for PeopleSoft. It automatically discovers PeopleSoft applications and translates network objects into manageable business services and functions. It provides a method for IT operators and managers at all business levels to easily measure and monitor real-user transactions — literally from clicks to views and business transactions.
		This accelerator supports real-user monitoring of PeopleSoft application components. Each individual user action is automatically matched to the correlating PeopleSoft node, site or view to provide detailed and rich contextual analyses. This state-of-the-art monitoring solution captures and reports all functional errors, discovers end-user performance issues, and identifies application issues specific to PeopleSoft applications Application managers can set up Key Performance Indicators (KPIs) and report views of interest to their critical packaged applications to gain a complete understanding of their usage, and automatically be alerted in case of KPI events.
		All of the capabilities for Oracle Real User Experience Insight as documented in End-User Monitoring are available as part of the Application Management Suite for PeopleSoft license. However, the restricted license for Real User Experience Insight only allows RUEI to be used for monitoring PeopleSoft applications developed using PeopleSoft Internet Architecture. Customers who want to use Real User Experience Insight to monitor other applications need to obtain a full use license of the product.
Application Management Suite for PeopleSoft Enterprise	REUI Features	<ul> <li>Provides an out-of-the-box real-user monitoring solution for PeopleSoft applications.</li> <li>Provides out-of-box translation and reporting of error messages in the user's window.</li> </ul>
		<ul> <li>Enables application managers to set up KPIs for critical packaged applications.</li> <li>Enables specification and monitoring of real-user busines transactions.</li> </ul>

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Licensed Links	The following information describes the Enterprise Manager links that require licensing of the Application Management Suite for PeopleSoft Enterprise:
		All PeopleSoft Targets page
		<ul> <li>From the Targets menu, select PeopleSoft. The All PeopleSoft Targets page is a licensed feature of the Application Management Suite for PeopleSoft.</li> </ul>
		PeopleSoft target home page
		<ul> <li>From the Targets menu, select PeopleSoft. On the All PeopleSoft Targets page, select a PeopleSoft target from the from the Name column.</li> </ul>
		<ul> <li>On the PeopleSoft target home page, all links, reports, and features available on or linked to from this page are licensed as part of the Application Management Suite for PeopleSoft</li> </ul>
		Monitoring
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Monitoring. All submenu items listed here are licensed as part of the Application Management Suite for PeopleSoft:</li> </ul>
		Charts
		All Metrics
		Metric and Collection Settings
		Metric Collection Errors
		Status History
		Incident Manager
		Alert History
		Blackouts
		Create/End Blackout
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Control, then select Create Blackout. The Create Blackout wizard is licensed as part of the Application Management Suite for PeopleSoft.</li> </ul>
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Control, then select End Blackout. The End Blackout functionality is licensed as part of the Application Management Suite for PeopleSoft</li> </ul>
		Job Activity
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Job Activity. All functionality, links, and reports included on the Job Activity page are licensed as part of the Application Managemer Suite for PeopleSoft</li> </ul>

Suite for PeopleSoft.



Management Pack	Type of Licensing Information	Licensing Information
Application Management	Licensed Links (continued)	Members
Suite for PeopleSoft Enterprise	· ,	<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Members. All submenu items listed here are licensed as part of the Application Management Suite for PeopleSoft:</li> </ul>
		Show All
		Topology
		Dashboard
		Operations
		History
		Target Information
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Target Information. The Target Information pop-up is licensed as part of the Application Management Suite for PeopleSoft.</li> </ul>
		Configuration
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Configuration. All submenu items listed here are licensed as part of the Application Management Suite for PeopleSoft:</li> </ul>
		Last Collected
		Topology
		Search
		Compare
		Comparison Job Activity
		History
		Save
		Saved
		Compliance
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Compliance. All submer items listed here are licensed as part of the Application Management Suite for PeopleSoft.</li> </ul>
		Results
		Standard Associations
		Real-time Observations
		Target Setup
		<ul> <li>From the Targets menu, select PeopleSoft. From the PeopleSoft target menu, select Target Setup. All submenu items listed here are licensed as part of the Application Management Suite for PeopleSoft.</li> </ul>
		Monitoring Configuration
		Administrator Access
		Remove Target
		Add to Group
		Properties



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Support for Service Level Management (SLM)	Features associated with Service Level Management for PeopleSoft are also licensed as part of the Application Management Suite for PeopleSoft Enterprise. These SLM features are restricted for use with PeopleSoft Enterprise applications and only for the CPUs licensed. They cannot be used for extensions to the PeopleSoft Enterprise. Extensions include but are not limited to custom forms, JSPs, Java/J2EE code, and integrations using BPEL.
		SLM offers a comprehensive monitoring solution that helps IT organizations achieve high availability and performance, and optimized service levels for their business services. SLM actively monitors and reports on the availability and performance of services, including end-user business functions, applications, and infrastructure components. Using service tests or synthetic transactions executed from remote user locations (beacons), businesses can monitor services from the end user's perspective and its correlation to the underlying IT infrastructure. In addition, SLM assesses the business impact of any service problem or failure and indicates whether service-level goals have been met.
		See Enterprise Manager Cloud Control Service Level Management in End-User Monitoring for more information.
Application Management Suite for PeopleSoft Enterprise	SLM Licensed CLI Verbs	The following Enterprise Manager CLI verbs are licensed as part of Service Level Management within the Application Management Suite for PeopleSoft:
		<ul> <li>emcli apply_template_tests</li> </ul>
		• emcli create_service
		• emcli add_target
Application Management Suite for PeopleSoft Enterprise	Support for Configuration Management	Configuration management automates the time-consuming and often error-prone process of managing host software and hardware configurations and deployments. The configuration management features that are licensed as part of the Application Management Suite for PeopleSoft Enterprise provides capabilities such as search and compare across all systems, configuration monitoring, policy management and compliance support, security configuration scoring and dashboards, and comprehensive reporting for PeopleSoft-specific software components, which include:  PeopleSoft System
		<ul> <li>PS Application Server Database</li> </ul>
		PS Application Server Domain
		<ul><li>PS Process Monitor</li><li>PS Process Scheduler Domain</li></ul>
		PS Process Scheduler Domain     PS Search Server Domain
		PS Web Site
		• PS PIA



Type of Licensing Information	Licensing Information
Configuration Management Features	Configuration Management features of the Application Management Suite for PeopleSoft enable users to:  View and analyze configuration View and analyze deployments/installations Search configuration Compare configuration Manage policies, including policy notifications Provide configuration reports
	<ul> <li>Provide configuration reports</li> <li>Provide repository tables/views that store/expose configuration data</li> </ul>
Configuration Management Licensed Reports	The following reports are part of the licensed features the Application Management Suite for PeopleSoft. To display the Report page, from the Enterprise Summary home page, click the <b>Targets</b> menu, then <b>PeopleSoft</b> . On the All PeopleSoft Targets page, select a PeopleSoft target from the from the Name column. From the PeopleSoft target menu, select <b>Information Publisher Reports</b> .
	License Pack Usage under Feature and License Pack Usage
	Monitoring reports:
	Aggregate Targets
	Alerts Availability History
	Availability Metrics Report
Configuration Management Licensed Policy Repository Views	The following policy repository views are licensed features of Configuration Management within the Application Management Suite for PeopleSoft:
	Policy Definition Views
	<pre>mgmt\$policies mgmt\$policy_parameters mgmt\$policy_violation_ctxt mgmt\$policy_viol_annotations mgmt\$policy_viol_notif_log</pre>
	Policy Association Views
	<pre>mgmt\$target_policies mgmt\$target_policy_settings mgmt\$target_policy_eval_sum mgmt\$target_compliance_score</pre>
	Policy Violation Views
	<pre>mgmt\$policy_violation_current mgmt\$policy_violation_history mgmt\$policy_violation_context</pre>
	Configuration Management Features  Configuration Management Licensed Reports  Configuration Management Licensed Policy Repository

Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Configuration Management Licensed Patching Repository Views	The following patching repository views are licensed features of Configuration Management within the Application Management Suite for PeopleSoft:
·		Linux Patching
		MGMT\$HOSTPATCH_HOSTS MGMT\$HOSTPATCH_GROUPS MGMT\$HOSTPATCH_GRP_COMPL_HIST MGMT\$HOSTPATCH_HOST_COMPL
		Oracle Home Patching
		MGMT\$CPF_ADVISORY_INFO MGMT\$CPF_HOMES_INFO MGMT\$CPF_PATCH_INFO MGMT\$EM_HOMES_PLATFORM MGMT\$HOMES_AFFECTED MGMT\$PATCH_ADVISORIES MGMT\$APPL_PATCH_AND_PATCHSET MGMT\$APPLIED_PATCHES MGMT\$APPLIED_PATCHSETS



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Configuration Management Licensed Configuration Repository Views	The following configuration repository views are licensed features of Configuration Management within the Application Management Suite for PeopleSoft:
·		Configuration Views
		<pre>mgmt\$db_tablespaces mgmt\$db_datafiles mgmt\$db_controlfiles</pre>
		Client Configuration Views
		MGMT\$CSA_COLLECTIONS MGMT\$CSA_FAILED MGMT\$CSA_HOST_OS_COMPONENTS MGMT\$CSA_HOST_SW MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CUSTOM MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_CPUS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_IOCARDS MGMT\$CSA_HOST_SPROPERTIES MGMT\$CSA_HOST_OS_FROPERTIES MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CSA_HOST_OS_FILESYSEMS MGMT\$CCA_CONFIG_HISTORY_KEY1 MGMT\$CCM_CONFIG_HISTORY_KEY2 MGMT\$CCM_CONFIG_HISTORY_KEY2 MGMT\$CCM_CONFIG_HISTORY_KEY3 MGMT\$CCM_CONFIG_HISTORY_KEY4 MGMT\$CCM_CONFIG_HISTORY_KEY5 MGMT\$CCM_CONFIG_HISTORY_KEY5 MGMT\$CCM_CONFIG_HISTORY_KEY6 MGMT\$CM_CONFIG_HISTORY_KEY6 MGMT\$CM_CONFIG_HISTORY_KEY6 MGMT\$CM_CONFIG_HISTORY_KEY6 MGMT\$CM_CONFIG_HISTORY_KEY6 MGMT\$CM_CONFIG_HISTORY_KEY6 MGMT\$COS_FS_MOUNT MGMT\$OS_FS_MOUNT MGMT\$OS_FS_MOUNT MGMT\$OS_PATCHES MGMT\$OS_PATCHES MGMT\$SOFTWARE_COMPONENT_ONEOFF MGMT\$SOFTWARE_COMPONENTS MGMT\$SOFTWARE_LEPENDENCIES MGMT\$SOFTWARE_LEPENDENCIES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_ONEOFF_PATCHES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES MGMT\$SOFTWARE_PATCHES_IN_HOMES



Management Pack	Type of Licensing Information	Licensing Information
Application Management Suite for PeopleSoft Enterprise	Configuration Management Licensed Security Repository Views	The following security repository views are licensed features of Configuration Management within the Application Management Suite for PeopleSoft:
		MGMT\$ESA_ALL_PRIVS_REPORT MGMT\$ESA_ANY_DICT_REPORT MGMT\$ESA_ANY_PRIV_REPORT MGMT\$ESA_AUDIT_SYSTEM_REPORT MGMT\$ESA_BECOME_USER_REPORT MGMT\$ESA_CATALOG_REPORT MGMT\$ESA_CONN_PRIV_REPORT MGMT\$ESA_CREATE_PRIV_REPORT MGMT\$ESA_DBA_GROUP_REPORT MGMT\$ESA_DBA_ROLE_REPORT MGMT\$ESA_DIRECT_PRIV_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_EXMPT_ACCESS_REPORT MGMT\$ESA_CH_OWNERSHIP_REPORT MGMT\$ESA_OH_OWNERSHIP_REPORT MGMT\$ESA_OH_PERMISSION_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_PUB_PRIV_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TABSP_OWNERS_REPORT MGMT\$ESA_TRC_AUD_PERM_REPORT MGMT\$ESA_WITH_ADMIN_REPORT MGMT\$ESA_WITH_GRANT_REPORT
Application Management Suite for PeopleSoft Enterprise	Licensed Components	You can only use the following pages against Java-based PeopleSoft Servers running PeopleSoft PIA-based applications. Customers must obtain a full-use license of the Oracle Middleware Management Pack to manage custom applications running on Java EE containers.  • All of the pages in Oracle JVM Diagnostics are licensed features of the Application Management Suite for PeopleSoft.  • All of the pages in the WebLogic Server are licensed features of the Application Management Suite for PeopleSoft.



8

#### **End-User Monitoring**

This chapter describes the management packs offered by Enterprise Manager in support of end-user monitoring. The following management packs are included:

- Oracle Real User Experience Insight
- Enterprise Manager Cloud Control Service Level Management

#### Oracle Real User Experience Insight

Oracle Real User Experience Insight (RUEI) enables enterprises to maximize the value of their business-critical applications by delivering insight into real end-user experiences. It can help identify lost revenue from frustrated users, reduce support costs by lowering call center volumes, accelerate problem resolution of poorly performing applications, and help businesses adapt to changing needs by providing insight into business trends and user preferences. It integrates performance analysis and usage analysis into a single offering, enabling business and IT stakeholders to develop a shared understanding of their application users' insight experience.

The following table describes this management pack offered by Enterprise Manager:

Management Pack	Type of Licensing Information	Licensing Information
Oracle Real User Capabilities Experience Insight	Capabilities	Oracle Real User Experience Insight (RUEI) uniquely captures a complete picture of the end-user experience and behavior, including:
		<ul> <li>Actual user-experience response time for key system transactions</li> <li>Synthetic transaction-based monitoring</li> <li>Complete quality of experience, including system and application errors and user-created errors</li> <li>Comprehensive perspective of application utilization — which transactions are used by which end-users, which are the most problematic and why, and so forth</li> <li>RUEI's passive monitoring capability is built using state-of-theart Network Protocol Analysis technology, which does not require any modification, changes, or instrumentation of the application. Its passive monitoring approach allows enterprises to deploy in production, without requiring costly test/QA environment validations.</li> <li>Additionally, RUEI includes the full capabilities of Enterprise Manager Cloud Control Service Level Management.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Real User Experience Insight	Features	Oracle Real User Experience Insight includes the following features:
		<ul> <li>Application/Suite/Service modeling to model critical application environment by domain, URL and argument filtering based on a wide range of supported protocols.</li> <li>Complete user experience monitoring of all requests and responses between a defined application environment and an end-user, determine usage, performance, and service level compliance.</li> <li>Customized Reports and Dashboard to dynamically group and filter data sets, apply filters and combine data points to generate graphs and tables that can be stored, printed, e-mailed, published in dashboards and share reports and data as exports in various formats.</li> <li>Enriched Data Exchange to store all monitored data in structured Db tables to allow for external data integration and or exposure to custom reporting tools.</li> <li>Key Performance Indicators (KPI) tracking and reporting to set thresholds to metrics, add conditions and filters to identify anomalies and establish trendline data.</li> <li>User flow modeling of critical business functions that end users have to go through as a predefined 'click-path'.</li> <li>User Session Diagnostics and Session Replay to report, review and replay entire user sessions from a clickstream perspective, store and share related raw and structured data.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Real User Experience Insight		The Suite Type E-Business Suite may be considered part of Oracle Real User Experience Insight and does not require a license for Oracle Enterprise Manager Application Management Suite for Oracle E-Business Suite.
		The following information describes the links in RUEI that have been included as part of the license of one of Oracle Enterprise Management Application Management Suites:
		<ul> <li>From main console of Real User Experience Insight, go to the main (tabbed) navigation pane on top, choose</li> <li>Configuration. Then from main navigation panel on the left, go to Applications and select Suites.</li> </ul>
		<ul> <li>On the Suites Configuration page, a wizard can be accessed through the link <b>New Suite</b>. On the second page of the wizard, a Suite Type has to be selected.</li> </ul>
		The following Suite Types are part of the license of the mentioned Oracle Enterprise Management Application Management Suites:
		Siebel: Application Management Suite for Siebel
		<ul> <li>E-Business Suite: Application Management Suite for Oracle E-Business Suite</li> </ul>
		<ul> <li>JD Edwards: Application Management Suite for JD Edwards EnterpriseOne</li> </ul>
		<ul> <li>Fusion framework: Application Management Suite for Fusion Applications</li> </ul>
		<ul> <li>PeopleSoft: Application Management Suite for PeopleSoft Enterprise</li> </ul>
		The mentioned links can only be used when the mentioned Oracle Enterprise Management Application Management Suite pack has been licensed.
		<ul> <li>Note: Suite Type E-Business Suite can be used for monitoring standalone Oracle Forms applications that are not considered part of Oracle E-Business Suite. All of the pages in Oracle Real User Experience Insight (RUEI) are licensed features of RUEI and require the pack license.</li> </ul>
		<ul> <li>Note: This information includes all feature links that may contain information derived from the creation of a Suite in RUEI, that is considered part of Oracle Enterprise Manager Application Management Suites.</li> </ul>
		Any and all methods of accessing pack functionality — whether through Oracle Enterprise Manager Cloud Control 13c, Desktop Widgets, command-line APIs, or direct access to the underlying data — require the Pack license.
Oracle Real User Experience Insight	Standalone Accelerator Licensing	Customers who previously licensed the standalone accelerators for RUEI can continue to use RUEI under their previously licensed terms. However, they are not entitled to use the capabilities contained in any of the mentioned Oracle Enterprise Management Application Management Suites.



Management Pack	Type of Licensing Information	Licensing Information
Oracle Real User Experience Insight	Business Application Licensed Links	The following links are licensable for Business Application targets:
		Real User Experience (RUEI) Data
		<ul> <li>From the Targets menu, select Business Application.         Select a Business Application target from the list. On the         Business Application home page, select the Business         Application target menu, then select Real User         Experience (RUEI), and finally RUEI data. All links in the         page are licensed by the Real User Experience Insight         pack.</li> </ul>
		RUEI Session Diagnostics
		<ul> <li>From the Targets menu, select Business Application.         Select a Business Application target from the list. On the         Business Application home page, select the Business         Application target menu, the select Real User         Experience (RUEI), and finally RUEI Session         Diagnostics. All links in the page are licensed by the Rea         User Experience Insight pack.</li> </ul>
		RUEI Metrics
		<ul> <li>From the Targets menu, select Business Application.         Select a Business Application target from the list. On the         Business Application home page, select the Business         Application target menu, then select Real User         Experience (RUEI), and finally RUEI Session         Diagnostics. All links in the page are licensed by the Real         User Experience Insight pack.</li> </ul>
		Business Transaction Drill-Down Page
		<ul> <li>From the Targets menu, select Business Application.</li> <li>Select a Business Application target from the list. On the Business Application home page, select any link within the Business Transaction Region.</li> </ul>
		Business Application home page
		<ul> <li>From the Business Application menu, access is available to the home page. There are licensable links on regions that could be part of the home page under Real User Experience Insight. These licensable links could include the following regions:</li> </ul>
		RUEI - Key Performance Indicators (KPI)
		RUEI - Top Executed User Requests
		RUEI - Top user and application Violations
		RUEI - Top Users
		RUEI - User Flows
		Service Test Status
		SLA Dashboard
		SLA Summary Region
		<ul> <li>All functions of the mentioned regions are licensed by the Real User Experience Insight Pack.</li> </ul>



Management Pack	Type of Licensing Information	Licensing Information
Oracle Real User Experience Insight	Restricted-Use License	<ul> <li>A restricted use license of Oracle Analytics Server is included to enable you to run reports on the Oracle Real User Experience Insight (RUEI) repository and to modify provided layouts.</li> <li>Additional database options or additional servers for disaster recovery require separate licensing. You receive one single-instance database with the RUEI repository. In a scaled deployment of Oracle Real User Experience Insight, where multiple RUEI processing engines are deployed, you receive a single-instance database per engine. To protect the repository with Data Guard, you must purchase a license for the standby site. To protect the repository with Oracle Real Application Clusters, you must license the second node for the database, and both nodes require an Oracle Real Application Clusters license.</li> <li>The use of the RUEI repository for the Enriched Data Export Facility feature is included in the license. If the Enriched Data Exchange feature is configured to store data to separate database instance, not part of the RUEI repository, these nodes require an Oracle Database license.</li> </ul>

#### Enterprise Manager Cloud Control Service Level Management

Enterprise Manager Cloud Control Service Level Management (SLM) offers a rich monitoring solution that helps IT organizations achieve high availability and performance, and optimized service levels for their business services. SLM actively monitors and reports on the availability and performance of services, including end-user business functions, Web applications, and infrastructure components. Using service tests or synthetic transactions executed from remote user locations (beacons), businesses can monitor services from the end-users' perspectives and the services' correlation to the underlying IT infrastructure. In addition, SLM assesses the business impact of any service problem or failure, and indicates whether service level goals have been met.

The following table describes this management pack offered by Enterprise Manager:



Management Pack	Type of Licensing Information	Licensing information
Enterprise Manager Cloud Control Service Level Management (SLM)	Standalone Licensing	Enterprise Manager Cloud Control Service Level Management was introduced as a standalone Service Level Management Pack with Enterprise Manager version 10g release 2. Since Enterprise Manager 11g, Service Level Management is licensed as part of either:
		Oracle Real User Experience Insight
		<ul> <li>WebLogic Server Management pack Enterprise Edition</li> <li>SOA Management Pack Enterprise Edition</li> </ul>
		Management Pack for WebCenter
		<ul> <li>Management Pack for Non-Oracle Middleware</li> <li>Business Intelligence Management Pack</li> </ul>
		<ul> <li>Management Pack Plus for Identity Management</li> </ul>
		A subset of functionality in the Service Level Management Pack was previously included as part of the Diagnostics Pack for Application Server license. Customers who had licensed the Diagnostics Pack for Application Server 10g Release 1 are entitled to continue to use the following specific functionality without licensing any of the packs above:
		<ul> <li>Web Application service test monitoring with HTTP and HTTPS protocols (test type itself has been deprecated, existing tests will continue to work).</li> <li>Host monitoring with ping protocol.</li> </ul>
Enterprise Manager Cloud	Footures	
Enterprise Manager Cloud Control Service Level	Features	Enterprise Manager Cloud Control Service Level Management (SLM) includes the following features:
Management (SLM)		<ul> <li>Beacons measure availability and performance from representative key user locations.</li> </ul>
		<ul> <li>Complete service monitoring of availability, performance, usage, and service level compliance.</li> </ul>
		<ul> <li>Service Dashboards provide the ability to set up and store selections of Services and report them through the Service Dashboard page and detail page, allowing for direct review or mailing of the dashboard.</li> </ul>
		<ul> <li>Service modeling of critical business functions based on a wide range of supported protocols.</li> </ul>



Management Pack	Type of Licensing Information	Licensing information
Enterprise Manager Cloud Control Service Level Management (SLM)	Licensed Services Links	The following information describes the Enterprise Manager links that require licensing of SLM. This information does not include feature links that may contain information derived from the creation of tests and beacons, but are considered part of SLM. The list that follows assumes that you begin from the main Cloud Control home page:
		For configuration pages, from the <b>Targets</b> menu, select <b>Services</b> :
		<ul> <li>On the Services page, as part of the Generic Service creation Service Test step, defining a service's availability based on the execution of a service test is a licensed feature of Oracle Real User Experience Insight (RUEI).</li> <li>On the Services page, as part of the Generic Service creation, the Beacons page is a licensed feature of RUEI.</li> <li>On the Services page, click any Name link (except for Aggregate Service) in the table. On the Service page that appears, select the Monitoring Configuration sub-tab. The Service Tests and Beacons link on the Monitoring Configuration page is a licensed feature of RUEI.</li> <li>On the Services page, click either the Name link of a Generic Service or Forms Application in the table. On the Service page that appears, select the Monitoring Configuration sub-tab. On the Monitoring Configuration page, the Enable Forms Transaction Monitoring link is a licensed feature of RUEI.</li> <li>On the Monitoring Configuration page, select Availability Definition. Select Service Test from the drop-down list on the Availability Definition page. Defining a service's availability based on the execution of a service test is a licensed feature of RUEI.</li> </ul>
		For monitoring pages, from the Enterprise Manager home page, select the <b>Targets</b> menu, then <b>Services</b> :
		<ul> <li>On the Services page, select a service Name link in the table. On the Service page that appears, the Test Performance sub-tab and Black Out button are licensed features of RUEI.</li> </ul>
		<ul> <li>On the Services page, select a service Name link in the table. On the Service page that appears, select the Test Performance sub-tab. All links and controls on this page are licensed as part of RUEI.</li> </ul>
		The following Related Links are also part of RUEI:
		<ul><li>Alert History</li><li>Blackouts</li><li>Metric Baselines</li></ul>

Past Changes

Pending Changes (where applicable)



Management Pack	Type of Licensing Information	Licensing information
Enterprise Manager Cloud Control Service Level Management (SLM)	Licensed Forms Applications Links	The following information describes the Enterprise Manager links that require licensing of SLM. This information does not include feature links that may contain information derived from the creation of tests and beacons, but are considered part of SLM. The list that follows assumes that you begin from the main Cloud Control home page:
		For configuration pages, from the <b>Targets</b> menu, select <b>Services</b> :
		<ul> <li>On the Services page, select Forms Application from the drop-down list and click Go. Select Service Test from the drop down-menu on the Availability page of the Create Forms Application wizard. Defining a form application's availability based on the execution of a service test is a licensed feature of Oracle Real User Experience Insight (RUEI).</li> </ul>
		<ul> <li>On the Services page, select Forms Application from the drop-down list and click Go. The Beacons page of the Create Web Application wizard is a licensed feature of RUEI.</li> </ul>
		<ul> <li>On the Services page, click any Forms Application Name link, then select the Monitoring Configuration sub-tab. The Service Tests and Beacons link in the Generic Tasks section of the Monitoring Configuration page is a licensed feature of RUEI.</li> </ul>
		<ul> <li>On the Monitoring Configuration page, select Availability         Definition from the Generic Tasks section. The Service         Test choice from the drop-down list on the Availability         Definition page is a licensed feature of RUEI.     </li> </ul>
		For monitoring pages, from the <b>Targets</b> menu, select <b>Services</b> :
		<ul> <li>On the Services page, click a Forms Application Name link in the table to go to the Forms Application Home page. The Test Performance link and Black Out button are licensed features of RUEI.</li> </ul>
		The following Related Links are also part of RUEI:
		Alert History
		Blackouts
		Metric Baselines
		<ul><li>Past Changes</li><li>Pending Changes (where applicable)</li></ul>
		i origing origing (whole applicable)



Management Pack	Type of Licensing Information	Licensing information
Enterprise Manager Cloud Control Service Level Management (SLM)	Licensed CLI Verbs	The following Enterprise Manager command line interface (CLI) verbs are licensed as part of Enterprise Manager Cloud Control Service Level Management:
		add_beacon apply_template_tests assign_test_to_target delete_test disable_test enable_test extract_template remove_beacon set_availability set_key_beacons_and_tests sync_beacon
Enterprise Manager Cloud Control Service Level Management (SLM)	Restricted-Use License	A restricted use license of Oracle Functional Testing is included for the purpose of recording test scripts only.



9

## Oracle Cloud Infrastructure Integration

This chapter describes the Oracle Cloud Infrastructure (OCI) cloud services that analyze target-level data managed by Enterprise Manager.

Enterprise Manager data stored in the Oracle Management Repository (OMR) can be uploaded to the OCI Object Storage, where it can be analyzed by cloud-native services. This allows you to avail the capabilities of OCI services for Enterprise Manager targets. Once OCI connectivity is set up, your target data is automatically uploaded to the OCI Object Storage on a periodic basis.



The data extraction from Enterprise Manager and its managed data targets requires Oracle Database Diagnostics Pack license on the managed targets. For information, see Oracle Diagnostics Pack.

#### **Ops Insights**

Oracle Cloud Infrastructure Ops Insights is an OCI native service that provides holistic insight into database and host resource utilization and capacity.

#### For information on:

- Integrating Enterprise Manager with Ops Insights, see Integrating Enterprise Manager with OCI Services.
- Oracle Cloud subscription, see Buy an Oracle Cloud Subscription in Oracle Cloud Infrastructure documentation.
- Usage cost, see Observability and Management Platform Ops Insights and Oracle Cloud Storage Pricing.

10

## **Enterprise Manager Base Functionality**

This chapter outlines the list of features that are included with the base functionality of Oracle Enterprise Manager:

- Base Framework Feature Summary
- Base Database Management Feature Summary
- Base Middleware Management Feature Summary
- Base Engineered Systems Management Feature Summary
- Server, Storage, and Virtualization Management Feature Summary

The base installation of Enterprise Manager Cloud Control 13c includes several features free of charge with the purchase of any Oracle software license or Support contract.

#### Base Framework Feature Summary

The following items are included as part of framework features of Oracle Enterprise Manager Cloud Control 13c:

Base Framework Feature	Description
Agent Management	Start, stop, restart, and modify agent configuration from Oracle Enterprise Manager Cloud Control 13c. View agent health from agent home page.
Agent Provisioning and Patching	Automate deployment of agent software and patches to the target servers.
Agent-based Target Discovery	Discover targets running on a host automatically by deploying the agent.
Alerts and Metric Threshold Management (excludes notifications)	Configure thresholds for metrics and view alerts (server generated or generated based on threshold violation). This excludes notifications which requires one or more licensed Packs.
Auto-Discovery	Discover host on a network and promote to being managed by Enterprise Manager.
Dynamic Runbooks	Enable subject matter experts to encapsulate best practice steps for diagnosing and resolving issues into a runbook that can be executed directly inside Enterprise Manager.  Dynamic Runbooks can be used in the context of hosts, agents, and the Enterprise Manager System (Managing the Manager). Dynamic Runbooks used in the context of jobs is not a part of the Enterprise Manager Base Functionality. The license required is based on the target type of the job, i.e., the Enterprise Manager management pack that contains the monitoring features for the target type will apply.
Enterprise Manager App for Grafana	Render Enterprise Manager's metric data onto Grafana for flexible dashboards and related analytics.
Enterprise Manager Dashboards	Use Enterprise Manager dashboards to gather real-time data from the enterprise and display them in easy-to-interpret widgets.
Enterprise Manager Federation	Define all your Enterprise Manager sites and access critical information from a single new interface.



Base Framework Feature	Description
Enterprise Manager Mobile	Monitor Enterprise Manager sites from a mobile application. The application can be downloaded from the App Store® for Apple mobile devices and from Google Play for Android mobile devices.
Enterprise Manager Self Management and Monitoring	View Management Services and Repository and Management Service target pages and reports. View Enterprise Manager topology.
Enterprise Manager Support Workbench	Access Checker Central diagnostics checks. Run EMDiag Kit. Package and send Problem information to Oracle Support.
Event Compression	Manage incidents better by compressing or grouping related events into a single incident.  Event Compression can be used in the context of hosts, agents, and the Enterprise Manager System (Managing the Manager). When Event Compression is used in the context of jobs, licensing will be based on the target type of the job, i.e., the Enterprise Manager management pack that contains the monitoring features for the target type will apply. For example, if the target type of the job is a host, it will be covered under the Server, Storage, and Virtualization Management features.
Extensibility Development Kit (EDK)	Collection of tools, utilities, sample code, and documentation that enables creation of new plug-ins to extend Enterprise Manager's ability to monitor and manage new types of targets. In addition to the base framework features, the following features are available free of charge and for restricted use only for new targets created using the EDK, which are not Oracle supported targets such as Oracle Database and Oracle WebLogic Server:
	<ul> <li>Alert and Metric Threshold Management</li> <li>Metric and Alert/Event History</li> <li>Dynamic Metric Baselines and Adaptive Metric Thresholds</li> <li>Metric Extensions</li> <li>Monitoring Templates and Template Collections</li> <li>Notifications</li> <li>Blackouts</li> <li>Dynamic Runbooks</li> <li>Event Compression</li> <li>Management Connectors</li> </ul>
Groups and Systems Management	Enable administrators to manage multiple targets as one.
Information Publisher and Reporting	Create and manage reports in Enterprise Manager's embedded reporting solution or in the independently configured Oracle Analytics Server installation. Specific reports in Enterprise Manager may be licensed under Packs.
Job Diagnostics Dashboards	Diagnose problems and resolve job system performance issues using intuitive dashboards that provide an administrator view of the job system.
Job System and Corrective Actions	Automate routine (often repetitive) tasks. Enables automated response to metric alerts.
Monitoring and Incident Management	Provide administrators with ability to monitor targets individually or in groups or systems. View and manage incidents generate from events associated with targets.
My Oracle Support integration	Provide seamless access to My Oracle Support within the Enterprise Manager user interface. Manage Service Requests and review Knowledge Base articles, all without leaving the Enterprise Manager user interface.
Oracle Linux Virtualization (OLV)	Monitor Oracle Linux Virtualization Manager and its constituent parts. A comprehensive set of predefined performance and health metrics enables automated monitoring of the Oracle Linux Virtualization environment.
Parallel OMS Upgrades	Upgrade the primary OMS and then upgrade all additional OMS simultaneously.

Base Framework Feature	Description
Self-update (functionality in plug-ins may be licensed under Packs)	Update Enterprise Manager with new features or fixes based on new versions of software available on Oracle Technology Network (OTN) or My Oracle Support (MOS).
Software Library (excludes licensed software)	Manage software entities such as software patches, virtual appliance images, reference gold images, application software, and their associated directive scripts. This excludes any software entities that are a part of a licensed Pack.
User, Role and Credentials Management	Manage Enterprise Manager user access, the roles associated with users, and the credentials used by users to access targets.
vCPU Utilization Tracking	Track and report on Oracle product vCPU consumption on supported Oracle Engineered Systems.
Enterprise Manager-to-Oracle Cloud Infrastructure (OCI) Bridge	Enterprise Manager—to-Oracle Cloud Infrastructure (OCI) Bridge allows data transfer from Enterprise Manager targets and Oracle Management Repository (OMR) to OCI Object Storage where it can be accessed by cloud-native services.

### Base Database Management Feature Summary

Users of Standard Edition and Enterprise Edition databases can use the Base Framework features and the Base Database Management Features. The following items are included as part of base database management features of Enterprise Manager Cloud Control 13c:

Base Database Management Feature	Description
Add Protected Database for ZDLRA	Perform Recovery Appliance administration using the Add Protected Database operation verb, manage_ra.
Advisor Central	Initiate an Advisor operation for various database management tasks, such as Segment Advisor, Memory Advisor. Some Advisors may be licensed under Packs.
Data movement	Configure and manage movement of data between databases using features such streams, replication, data pump.
Database Migration Workbench	Migrate workloads from an on-premises database to an Autonomous Database using the Database Migration Workbench. Database Migration Workbench features include the actual migration, post-migration analysis, and post-migration performance comparison.
Error management	View error history reported in the database alert log. Manage and diagnose critical errors reported using Support Workbench. Package errors and associated trace files into incidents for reporting on My Oracle Support.
Execute SQL REST API	Use HTTP-based REST endpoints to execute SQL commands and extract data from the Oracle Management Repository or a database target configured in Enterprise Manager.
Grid Infrastructure management	Manage all components of Oracle Grid Infrastructure including Automatic Storage Management (ASM) and Clusterware (including Cluster Ready Services (CRS).
High availability	Configure and manage database backups, initiate recovery actions, configure flashback. View and configure standby databases. Analyze high availability configuration against Maximum Availability Architecture.
Multi-OMS deployment for high	OMS deployed on the primary site in an active/active configuration.
availability	<b>Note:</b> In a high availability/disaster recovery configuration with primary and standby sites, additional licensing is required to use RAC or Data Guard for the Oracle Management Repository. For information, see Oracle Enterprise Manager Restricted-use License.
Non-structured data management	Manage multi-dimensional data such as OLAP, semi-structured data such as XML, and unstructured data such as text.



Base Database Management Feature	Description
Object, program and initialization parameters management	Manage database objects such as tables, indexes, views, materialized views.  Manage PL/SQL and Java-based database programs such as triggers, procedures, functions. View and manage database initialization parameters.
Optimizer Management	Manage optimizer statistics and SQL plans. Some capabilities under SQL Plan Control may be licensed under Packs.
Pluggable Database (PDB) Create/Plug/ Unplug	Create PDB from seed, plug PDB from unplugged PDB and unplug PDB (single target operations only using non-customized deployment procedure).
Resource Management	Manage the distribution of operating system resources by defining and assigning resource plans to consumer groups within the database.
Scheduler Central	Manage automated jobs maintained by Oracle Database and Oracle Enterprise Manager including Automatic Maintenance Tasks.
Security	Manage database users, roles, profiles, configure Virtual Private Database (VPN) policies. Certain database security pages are licensed under the corresponding database security option, for example, Database Vault, Audit Vault.
SQL Execution	View SQL execution history, execute ad hoc SQL using Run SQL or SQL Worksheet.
Space and Undo Management	Manage control files, tablespaces, datafiles, log files, automatic undo management.
Support Workbench	View critical errors captured in the Automatic Diagnostic Repository, create incidents from errors to report to My Oracle Support.
Upgrade Planner	My Oracle Support Upgrade Planner.
Workspace management	Define and configure workspaces to maintain different versions of table row values in different workspaces.

### Base Middleware Management Feature Summary

The following items are included as part of Enterprise Manager Cloud Control 13c Middleware management:



Only the target home page itself is unlicensed. All links including metric links to look at historical metrics are part of the appropriate middleware management pack and require a license.

Base Middleware Management Feature	Description
Discovery of Oracle Fusion Middleware Farm/WebLogic Domain	Allow for discovery of Oracle WebLogic Domains and Oracle Fusion Middleware Farms (includes discovery of Fusion Middleware components deployed to the domains as well).
Drilldowns to Administration Consoles	Provide links for launching and accessing administration consoles such as the Oracle Enterprise Manager Fusion Middleware Control console and Oracle WebLogic Server Administration Console.



Base Middleware Management Feature	Description
Fusion Middleware targets home pages	View target home pages including, but not limited to the following target types:
(Exception is JVM and JVM Pool target home pages; these two home pages are part of a management pack and require a license.)	<ul> <li>WebLogic Domain</li> <li>Fusion Middleware Farm</li> <li>WebLogic Cluster and WebLogic Server</li> <li>Application Deployment and Clustered Application Deployment</li> <li>WebCenter</li> <li>Oracle Service Bus target</li> <li>SOA Infrastructure and Composite target</li> </ul>
Process Control	Ability to start, stop, restart Oracle Fusion Middleware related components.
Refresh or Rediscovery of Oracle Fusion Middleware Farm/WebLogic Domain	Refresh or rediscover Oracle Fusion Middleware Farm/WebLogic Domain and its members - either manually or automatically with a predefined job.
Support Workbench	Automatic collection of diagnostic data when critical errors occur in WebLogic Server and SOA Infrastructure components. Data can then be quickly and easily packaged and sent to Oracle Support to reduce problem resolution time.
WLST Script job	Schedule and track the execution of WLST commands from the Cloud Control console.

## Base Engineered Systems Management Feature Summary

Engineered Systems Management components include:

- Exadata Management Features
- Exalogic Management Features
- Private Cloud Appliance Management Features

#### **Exadata Management Features**

The following pages are included as part of Enterprise Manager Cloud Control 13c Exadata management:

Exadata Management Feature	Description
Schematic	Database Machine Schematic
	Physical components
	Physical placement
	Temperature of cells
	Alter physical placement of each component through Edit
	Status summary of each component
	List of alerts
Topology Viewer	DB Machine Software Topology
	System Members
	InfiniBand Switch
Exadata Grid	<ul> <li>Overview – Target status, Cell health, release version and IORM status</li> </ul>
	<ul> <li>Capacity – Disk capacity allocated to ASM, ASM Diskgroup summary and cell incidents</li> </ul>
	Note: these regions are licensed by the Oracle Diagnostics Pack:
	Workload Distribution by Databases
	<ul> <li>Cell level Performance charts – I/O, CPU, Network and Response Time</li> </ul>



Exadata Management Feature	Description
IB Network page	Overview – status, switches, firmware version, Schematic explaining the port status, Node status, List of alerts, incidents.
	Note: these regions are licensed by the Oracle Diagnostics Pack:
	Throughput details
ILOM, KVM, Cisco Switch, PDU	Summary, Job Activity, list of alerts

#### **Exalogic Management Features**

The following items are included as part of Enterprise Manager Cloud Control 13c Exalogic management:

Exalogic Management Feature	Description
Basic monitoring	<ul> <li>Component placement – schematic view, temperature, hardware up and down status</li> </ul>
	Software dashboard page
	Virtualization pages within the Exalogic Navigation tree
	Storage pages
	Topology view of the system and components
	Exalogic InfiniBand (IB) Fabric Page

#### Private Cloud Appliance Management Features

The following items are included as part of Enterprise manager cloud control Private Cloud Appliance management:

Private Cloud Appliance Feature	Description
IaaS Self Service Portal	Includes deployment of Operating System only templates or assemblies. Note: Provisioning templates or assemblies containing Oracle software such as Database or WebLogic Server requires the relevant Cloud and Lifecycle packs.
Chargeback	Chargeback for host only metrics (CPU, Memory and Storage etc).
Rack Monitoring	<ul> <li>Private cloud appliance schematic</li> <li>Physical placement</li> <li>Temperature and IP information</li> <li>Status summary of each component</li> <li>List of alerts and incidents</li> </ul>
Topology Viewer	<ul><li>Private cloud appliance topology</li><li>System members</li><li>Switch fabric</li></ul>

# Server, Storage, and Virtualization Management Feature Summary

The following items are included as part of Enterprise Manager Cloud Control 13c server and virtualization management. This also includes Oracle VM Server, Oracle VM Server for X86 with the Private Cloud Appliance and Oracle Linux Virtualization Manager.

Server, Storage, and Virtualization Features	Description  Provide remote administration capabilities for hosts.			
Administration				
Chargeback	Chargeback and Metering for guest virtual machines (VMs) and hosts.			
	Note: Chargeback for VMs and hosts is free and does not require a license.			
Configuration management	Provide hardware and software configuration data collection.			
Consolidation Planner	Determine optimal server consolidation scenarios by leveraging data collected by Cloud Control against business and technical constraints.			
Dynamic Topology	Maintain the child-to-parent relationship between the service processor, hypervisor, global zone, control domain, and virtual machine.			
Guest VM/Linux OS Patching	Provide automated host patching and integration with an Unbreakable Linux network (ULN).			
Historical Trending	View historical workload trends.			
Host monitoring and management	Monitor of Cloud Control component services, such as jobs and notifications.			
Infrastructure Management	Provide ready access to Home, Self-Service, Request Dashboard pages through the Infrastructure Cloud menu.			
Metric Extensions	Create new metrics to monitor conditions specific to customer environments.			
	<b>Note:</b> Metric Extensions are available free of charge only for the host target and not for other targets.			
Monitoring Profiles for V12N	Provide monitoring attributes for issues associated with Oracle VM Server for SPARC and Oracle Solaris Container environments.			
Notifications	Notification on events and incidents for infrastructure targets (hosts, storage, VMs).			
Management Connectors	Management Connectors, such as ticketing connectors and event connectors, integrate Enterprise Manager with other management systems. Ticketing connectors open help desk tickets for incidents raised in Enterprise Manager. Event connectors share event information with other event management systems. The use of Management Connectors are available specifically for events and incidents on infrastructure targets (hosts, storage, VMs).			
Oracle VM and Guest VM provisioning	Deploy Oracle VM server software to bare-metal servers and create Guest VMs using operating system ISOs or using the PXE mode.			
Oracle VM management including Oracle VM manager and self-service console (laaS Self Service Portal)	Manage and monitor Virtual Machines, hypervisors, storage and network environment.			
Disaster Recovery (Site Guard) for Oracle VM	Disaster Recovery via Site Guard to automate complete site failover of Oracle Virtual Machine.			
Performance monitoring	Provide real-time and historical performance monitoring.			
Storage Plug-in	Manage storage assets more effectively.			



A

# Third-Party Licenses for Enterprise Manager Cloud Control

This appendix contains licensing information about certain third-party products included with Enterprise Manager Cloud Control 13c.

The following sections are provided:

- Open Source or Other Separately Licensed Software Distributed in Enterprise Manager Cloud Control
- Antlr v 4.7.2
- Apache Software Foundation Licenses, Version 2.0
- Common Public License v 1.0
- Eclipse Distribution License v 1.0
- Eclipse Public License v 1.0
- Eclipse Public License v 2.0
- GNU General Public License v 2.0
- GNU Lesser General Public License version 2.1
- Helidon License Information
- ICU4J License Information
- Info-ZIP UnZip License
- Infozip Zip License
- Insecure NMAP License, Version 7.90
- JPython 1.1.x Software License
- Jython 2.0, 2.1 License
- Mozilla Public License Version 2.0
- OpenSSL License
- Original SSLeay License
- The "Artistic License"
- The Jython License
- · The Legion of the Bouncy Castle
- The MIT License
- The Perl License 5.32.0
- Additional Licensing Information



# Open Source or Other Separately Licensed Software Distributed in Enterprise Manager Cloud Control

Required notices for open source software products or components distributed in Enterprise Manager Cloud Control 13c 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 open source software.

Provider	Components	Version	Licensing information
Marijn	CodeMirror	5.58.2	MIT License
Haverbeke			Copyright (C) 2017 by Marijn Haverbeke and others
			For a copy of the license, see The MIT License.
Apache	SSHD	2.5.0	For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
Apache 2.0	ovirt-engine-sdk-	4.3.6	ovirt-engine-sdk-java
	java		Apache Commons Lang
			Copyright 2001-2009 The Apache Software Foundation
			Apache HttpComponents Commons HttpClient
			Copyright 1999-2008 The Apache Software Foundation
			This copy of Jackson JSON processor 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: http://www.apache.org/licenses/
			A copy is also included with both the downloadable source code package and jar that contains class byte codes, as file "ASL 2.0". In both cases,that file should be located next to this file: in source distribution the location should be "release-notes/as1"; and in jar "META-INF/"
			This product includes software developed by The Apache Software Foundation (http://www.apache.org/).
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.



Provider	Components	Version	Licensing information
CPAN	Net-DNS	1.27	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 the author not be used in advertising or publicity pertaining to distribution of the software without specific prior written permission.
			THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.
			COPYRIGHT Copyright (c)1997-2000 Michael Fuhr. Portions Copyright (c)2002,2003 Chris Reinhardt. Portions Copyright (c)2005 Olaf Kolkman (RIPE NCC) Portions Copyright (c)2006 Olaf Kolkman (NLnet Labs) Portions Copyright (c)2014 Dick Franks All rights reserved.



Provider	Components	Version	Licensing information			
CPAN	perl module: IO-	perl module: IO- tty 1.15	For	a copy of the license, see The "Artistic License".		
	tty		Following Copyright notices are from multiple source code			
			files in the IO-Tty-1.12.tar.gz file			
			fror	n SOpenBSD: misc.c,v 1.12 2001/06/26 17:27:24 markus		
			Exp \$ Copyright (c) 2000 Markus Friedl. All rights reserved.			
			Red	distribution and use in source and binary forms, with or without diffication, are permitted provided that the following conditions 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.		
			AN' NO ME PU AU' SPI (INI SUI PRI ANI STI	IS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS" AND Y EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT T LIMITED TO, THE IMPLIED WARRANTIES OF RCHANTABILITY AND FITNESS FOR A PARTICULAR RPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE THOR BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL ECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES CLUDING, BUT NOT LIMITED TO, PROCUREMENT OF BSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR OFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED D ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT RICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR HERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS FTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCHMAGE.		
			fror Exp	<pre>m \$OpenBSD: strlcpy.c,v 1.5 2001/05/13 15:40:16 deraadt   \$</pre>		
			Copyright (c) 1998 Todd C. Miller			
				rights reserved.		
			Redistribution and use in source and binary forms, with or witho 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 ``AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED T THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. I NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIREC INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR					



Provider	Components	Version	Licensing information
			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.
			Pty.pm
			=head1 AUTHORS
			Originally by Graham Barr EFE, based on the Ptty module by Nick Ing-Simmons EFE.
			Now maintained and heavily rewritten by Roland Giersig EFE.
			Contains copyrighted stuff from openssh v3.0p1, authored by Tatu Ylonen, Markus Friedl and Todd C. Miller.
			=head1 COPYRIGHT
			Now all code is free software; you can redistribute it and/or modify under the same terms as Perl itself.
			Nevertheless the above AUTHORS retain their copyrights to the various parts and want to receive credit if their source code is used See the source for details.
			=head1 DISCLAIMER
			THIS SOFTWARE IS PROVIDED "AS IS" AND ANY EXPRESS OR IMPLIEDWARRANTIES, INCLUDING, BUT NOT LIMITED TO THE IMPLIED WARRANTIES OFMERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSSOF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED ANDON ANY THEORY OLIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, ORTORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THEUSE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
			In other words: Use at your own risk. Provided as is. Your mileage may vary. Read the source, Luke!
			And finally, just to be sure:
			Any Use of This Product, in Any Manner Whatsoever, Will Increase the Amount of Disorder in the Universe. Although No Liability Is Implied Herein, the Consumer Is Warned That This Process Will Ultimately Lead to the Heat Death of the Universe.
			Tty.pm
			=head1 AUTHORS
			Originally by Graham Barr EFE, based on the Ptty module by Nick Ing-Simmons EFE.
			Now maintained and heavily rewritten by Roland Giersig EFE.
			Contains copyrighted stuff from openssh v3.0p1, authored by TatuYlonen, Markus Friedl and Todd C. Miller. I also got a lot of inspiration from the pty code in Xemacs.



Provider	Components	Version	Licensing information
			Now all code is free software; you can redistribute it and/or modify it under the same terms as Perl itself.
			Nevertheless the above AUTHORS retain their copyrights to the various parts and want to receive credit if their source code is used. See the source for details.
			=head1 DISCLAIMER
			THIS SOFTWARE IS PROVIDED ``AS IS" AND ANY EXPRESS OR IMPLIEDWARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OFMERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED.IN NO EVENT SHALL THE AUTHORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSSOF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED ANDON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THEUSE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
			In other words: Use at your own risk. Provided as is. Your mileage may vary. Read the source, Luke!
			And finally, just to be sure:
			Any Use of This Product, in Any Manner Whatsoever, Will Increase the Amount of Disorder in the Universe. Although No Liability Is Implied Herein, the Consumer Is Warned That This Process Will Ultimately Lead to the Heat Death of the Universe.
Codehaus	Jettison	1.4.1	Copyright 2006 Envoi Solutions LLC
			Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.



Provider	Components	Version	Licensing information
Eclipse Foundation	Jetty	9.4.35.v2020112 0	Oracle elects to use Jetty under the terms of the Apache 2.0 license.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			=======================================
			Notice.txt
			Notices for Eclipse Jetty
			This content is produced and maintained by the Eclipse Jetty project.
			<pre>Project home: https://www.eclipse.org/jetty/</pre>
			Trademarks
			Eclipse Jetty, and Jetty are trademarks of the Eclipse Foundation. Copyright
			All contributions are the property of the respective authors or of entities to which copyright has been assigned by the authors (eg. employer). Declared Project Licenses
			This artifacts of this project are made available under the terms of:
			* the Eclipse Public License v. 1.0
			http://www.eclipse.org/legal/epl-v10.html
			SPDX-License-Identifier: EPL-1.0
			or
			* the Apache License, Version 2.0
			https://www.apache.org/licenses/LICENSE-2.0.
			SPDX-License-Identifier: Apache-2.0  The following dependencies are EPL.
			* org.eclipse.jetty.orbit:org.eclipse.jdt.core
			The following dependencies are EPL and ASL2.
			* org.eclipse.jetty.orbit:javax.security.auth.message The following dependencies are licensed by the OW2 Foundation
			according to the terms of <pre>http://asm.ow2.org/license.html</pre>
			* org.ow2.asm:asm-commons * org.ow2.asm:asm
			The following dependencies are ASL2 licensed.
			* org.apache.taglibs:taglibs-standard-spec * org.apache.taglibs:taglibs-standard-impl
			The following dependencies 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



Provider	Components	Version	Licensing information
			* 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
			Cryptography
			Content may contain encryption software. The country in which you are currently may have restrictions on the import, possession, and

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.

The UnixCrypt.java code implements the one way cryptography used by Unix systems for simple password protection. Copyright 1996 Aki Yoshida, modified April 2001 by Iris Van den Broeke, Daniel Deville. Permission to use, copy, modify and distribute UnixCrypt for non-commercial or commercial purposes and without fee is granted provided that the copyright notice appears in all copies.

-----

=========

\_\_\_\_\_

\_\_\_\_\_

https://asm.ow2.io/license.html

#### License

ASM is released under the following 3-Clause BSD License:

ASM: a very small and fast Java bytecode manipulation framework Copyright (c) 2000-2011 INRIA, France Telecom

All rights reserved.

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

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of the copyright 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, THEIMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSEARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR



Provider	Components	Version	Licensing information
			CONTRIBUTORS BELIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, ORCONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OFSUBSTITUTE GOODS OR SERVICES:
			LOSS OF USE, DATA, OR PROFITS; OR BUSINESSINTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER INCONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OFTHE POSSIBILITY OF SUCH
			DAMAGE. ====================================



Provider	Components	Version	Licensing information
Eclipse Foundation	Jetty	9.4.43.V2021062 9	Oracle elects to use Jetty under the terms of the Apache 2.0 license.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			Notice.txt
			Notices for Eclipse Jetty
			=======================================
			This content is produced and maintained by the Eclipse Jetty project.
			<pre>Project home: https://www.eclipse.org/jetty/</pre>
			Trademarks
			Eclipse Jetty, and Jetty are trademarks of the Eclipse Foundation.
			Copyright
			All contributions are the property of the respective authors or of entities to which copyright has been assigned by the authors (eg. employer).
			Declared Project Licenses
			This artifacts of this project are made available under the terms of:
			This program and the accompanying materials are made available under the terms of the Eclipse Public License 1.0 which is available at https://www.eclipse.org/org/documents/epl-1.0/EPL-1.0.txt or the Apache Software License 2.0 which is available at https://www.apache.org/licenses/LICENSE-2.0
			Notice for Jetty Web Container
			javax.websocket.client-impl
			<pre>javax.websocket.client-impl org.eclipse.jetty.websocket:websocket-api</pre>
			org.eclipse.jetty.websocket:websocket-client
			org.eclipse.jetty.websocket:websocket-common
			org.eclipse.jetty.websocket:websocket-server
			org.eclipse.jetty.websocket:websocket-servle
			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
			*TI F !: D !!! 40!!



\* The Eclipse Public 1.0 License http://www.eclipse.org/

legal/epl-v10.html

Provider	Components	Version	Licensing information
			Jetty may be distributed under either license.
			<del></del>
			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
			Oracle
			The following artifacts are CDDL + GPLv2 with classpath exception.
			https://glassfish.dev.java.net/nonav/public/CDDL+GPL.htm
			* javax.servlet:javax.servlet-api
			* javax.annotation:javax.annotation-api
			*javax.transaction:javax.transaction-api
			* javax.websocket:javax.websocket-api
			Oracle OpenJDK
			If ALPN is used to negotiate HTTP/2 connections, then the following artifacts may be included in the distribution or download when ALPN module is selected.
			* java.sun.security.ssl
			These artifacts replace/modify OpenJDK classes. The modifications are hosted at github and both modified and origina are under GPL v2 with classpath exceptions. http://openjdk.java.net/legal/gplv2+ce.html
			OW2
			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
			The following artifacts are ASL2 licensed.
			org.apache.taglibs:taglibs-standard-spec
			org.apache.taglibs:taglibs-standard-impl
			MortBay
			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



Provider	Components	Version	Licensing information
			*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
			The following artifacts are EPL and ASL2.
			org.eclipse.jetty.toolchain:jetty-schemas
			Assorted
			The UnixCrypt.java code implements the one way cryptography used by Unix systems for simple password protection. Copyright 1996 Aki Yoshida, modified April 2001 by Iris Van den Broeke, Daniel Deville. Permission to use, copy, modify and distribute UnixCrypt for non-commercial or commercial purposes and witho fee is granted provided that the copyright notice appears in all copies.
			end of Jetty Web Container
			DEPENDENCY org.ow2.asm:asm
			License
			https://asm.ow2.io/license.html
			License
			ASM is released under the following 3-Clause BSD License:
			ASM: a very small and fast Java bytecode manipulation framework
			Copyright (c) 2000-2011 INRIA, France Telecom
			All rights reserved.
			Redistribution and use in source and binary forms, with or withou modification, are permitted provided that the following conditions are met:
			<ol> <li>Redistributions of source code must retain the above copyrig notice, this list of conditions and the following disclaimer.</li> </ol>
			<ol><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></ol>
			<ol> <li>Neither the name of the copyright holders nor the names of it contributors may be used to endorse or promote products derived from this software without specific prior written permission.</li> </ol>
			THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS"AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED T



THEIMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSEARE DISCLAIMED. IN

Provider	Components	Version	Licensing information
			NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BELIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, ORCONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OFSUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESSINTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER INCONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OFTHE POSSIBILITY OF SUCH DAMAGE.
			======End of LICENSE of org.ow2.asm:asm
			component======
			org.eclipse.jetty.toolchain jetty-schemas
			COPYRIGHT: Copyright 1995-2018 Mort Bay Consulting Pty Ltd.
			LICENSE: Apache Software License - Version 2.0 + Eclipse Public License - Version 1.0
			org.mortbay.jasper apache-jsp
			COPYRIGHT: Mort Bay Consulting
			LICENSE: Apache 2.0
			org.apache.taglibs taglibs-standard-imp
			org.apache.taglibs taglibs-standard-spec
			COPYRIGHT: Copyright © 2001-2015 The Apache Software Foundation. All Rights Reserved.
			LICENSE: Apache 2.0
			Jetty Orbit :: JASPI API
			(org.eclipse.jetty.orbit:javax.security.auth.message)  Java Authentication SPI for Containers
			Copyright 2003-2009 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).
			Apache 2.0 License
			com.github.jnr jnr-unixsocket
			COPYRIGHT:
			Copyright (C) 2016 Fritz Elfert Copyright (C) 2009 Wayne Meissner Copyright (C) 2016 Marcus Linke Copyright (C) 2014 Greg Vanore
			LICENSE: Apache 2.0 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,



Provider	Components	Version	Licensing information
			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.
FasterXML, LLC	jackson-	2.11.2	Jackson Annotations
	annotations		Copyright (c) 2020 Tatu Saloranta
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
FasterXML, LLC	jackson- annotations	2.10.0	Jackson Annotations
			Copyright (c) 2019 Tatu Saloranta
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
FasterXML, LLC	jackson- annotations	2.13.2	Copyright © 2007–2022 FasterXML. All rights reserved.
			LICENSE: Apache 2.0 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.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.



Provider	Components	Version	Licensing information
FasterXML, LLC	jackson-core	2.10.0, 2.11.2	Jackson Core
			Copyright © 2008–2019 FasterXML. All rights reserved.
			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: http://www.apache.org/licenses/LICENSE-2.0.
			NOTICE FILE:
			=======================================
			Jackson JSON processor
			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.
			Licensing
			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 (http://fasterxml.com).
			Credits
			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.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
FasterXML, LLC	jackson-core	2.13.2	Copyright © 2008–2022 FasterXML. All rights reserved.
			# Jackson JSON processor
			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.
			## Licensing
			Jackson 2.x core and extension components are licensed under Apache License 2.0 To find the details that apply to this artifact see the accompanying LICENSE file.
			## Credits
			A list of contributors may be found from CREDITS(-2.x) file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.
			Apache License
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.



Provider	Components	Version	Licensing information
FasterXML, LLC	jackson-databind	2.10.0	Jackson Databind
			Copyright (c) 2019 Tatu Saloranta
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			COPYRIGHT NOTICE
			#Jackson JSON processor
			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.
			jackson-core 2.10.0
			COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE: Apache 2.0
			##Credits
			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.
			jackson-annotations 2.10.0
			COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE: Apache 2.0



Provider	Components	Version	Licensing information
FasterXML, LLC	jackson-databind	2.11.2	TOP LEVEL COMPONENT NAMES:  com.fasterxml.jackson.core:jackson-databind Copyright ©  2008–2012 FasterXML. All rights reserved.
			This copy of Jackson JSON processor databind module 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.
			NOTICE FILE:
			=======================================
			Jackson JSON processor
			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.
			Licensing
			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 (http://fasterxml.com).
			Credits
			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.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			FOURTH-PARTY DEPENDENCY
			jackson-core 2.11.2
			COPYRIGHT: Copyright (c) 2007-2020 Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE: Apache 2.0
			jackson-annotations 2.11.2
			COPYRIGHT: Copyright (c) 2007- 2020 Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE: Apache 2.0



Provider	Components	Version	Licensing information
FasterXML, LLC	jackson-databind	2.13.2.2	Top-level license
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			Copyright notices
			# Jackson JSON processor
			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.
			## Licensing
			Jackson 2.x core and extension components are licensed under Apache License 2.0 To find the details that apply to this artifact see the accompanying LICENSE file.
			## Credits
			A list of contributors may be found from CREDITS(-2.x) file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.
			Fourth-party information
			== jackson-core
			== License
			Apache 2.0
			== Copyright Notices
			Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
			# Jackson JSON processor
			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.
			## Licensing
			Jackson 2.x core and extension components are licensed under Apache License 2.0 To find the details that apply to this artifact see the accompanying LICENSE file.
			## Credits
			A list of contributors may be found from CREDITS(-2.x) file, which is included in some artifacts (usually source distributions); but is always available from the source code management (SCM) system project uses.
			== jackson-annotations
			== License
			Apache 2.0
			== Copyright Notices
			Copyright © 2007–2022 FasterXML. All rights reserved.
			LICENSE: Apache 2.0 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,



Provider	Components	Version	Licensing information
			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.
FasterXML, LLC	jackson-jaxrs-	2.10.0	jackson-jaxrs-base v2.10.0
	base		COPYRIGHT: Copyright FasterXML.com
			LICENSE: Apache 2.0
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			4P Dependencies:
			jackson-core 2.10.0
			jackson-annotations 2.10.0
			jackson-databind 2.10.0
			COPYRIGHT:
			Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
			Copyright (c) Fasterxml
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.



Provider	Components	Version	Licensing information
FasterXML, LLC	jackson-jaxrs-	2.11.2	jackson-jaxrs-base v2.11.2
	base		Copyright 2020 FasterXML. All rights reserved.
			LICENSE: Apache 2.0
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			Fourth-party dependencies:
			jackson-annotations 2.11.2
			Copyright (c) 2007-2020 Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE file text: This copy of Jackson JSON processor annotations 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:
			http://www.apache.org/licenses/LICENSE-2.0
			No NOTICE file in jackson-annotations source directory
			jackson-core 2.11.2
			Copyright (c) 2007-2020 Tatu Saloranta, tatu.saloranta@iki.fi
			LICENSE file text:
			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 specifing rights regarding derivate works.
			You may obtain a copy of the License at:
			http://www.apache.org/licenses/LICENSE-2.0
			NOTICE file text:
			LICENSE file text:
			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 specifing rights regarding derivate works.
			You may obtain a copy of the License at:
			http://www.apache.org/licenses/LICENSE-2.0
			NOTICE file text:
			# Jackson JSON processor
			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.
			## Licensing
			Jackson core and extension components may licensed under different licenses.



Provider	Components	Version	Licensing information
			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 (http://fasterxml.com).
			## Credits
			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.
FasterXML, LLC	jackson-jaxrs-	2.10.0	Jackson JAXRS JSON 2.10.0
	json-provider		Copyright (c) 2019 Tatu Saloranta
			Copyright (c) Fasterxml
			LICENSE: Apache 2.0
			======================================
			All licensed under the Apache 2.0 License.
			·
			<pre>jackson-jaxrs-base 2.10.0 jackson-module-jaxb-annotations 2.10.0</pre>
			jackson-annotations 2.10.0
			jackson-core 2.10.0
			jackson-databind 2.10.0
			=======================================
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			The fourth party tools are jackson-jaxrs-base and jackson-module-jaxb-annotations. They are both under LICENSE: Apach 2.0 as stated above.



Provider	Components	Version	Licensing information			
FasterXML, LLC	jackson-jaxrs-	2.11.2	jackson-jaxrs-json-provider			
	json-provider		Copyright (c) Fasterxml 2020			
			NOTICE file text:			
			# Jackson JSON processor			
			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.			
			## Licensing			
			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 (http://			
			fasterxml.com).			
			## Credits			
						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.
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.			
			=======================================			
			Dependencies:			
			jackson-core			
			Copyright © 2008–2019 FasterXML. All rights reserved.			
			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 specifing rights regarding derivate works.			
			You may obtain a copy of the License at: http://www.apache.orglicenses/LICENSE-2.0			
			jackson-jaxrs-base			
			Copyright (c) Fasterxml 2020			
			This copy of Jackson JSON processor databind module is licensed under the Apache (Software) License, version 2.0 ("the License").			
			See the License for details about distribution rights, and the specifing rights regarding derivate works.			
			You may obtain a copy of the License at:			
			http://www.apache.org/licenses/LICENSE-2.0			
			jackson-module-jaxb-annotations			
			Copyright (c) Fasterxml 2020			
			This copy of Jackson JSON processor `jackson-module-jaxb-annotations` module is licensed under the Apache (Software) License, version 2.0 ("the License").			
			See the License for details about distribution rights, and the specifing rights regarding derivate works.			



Provider	Components	Version	Licensing information
			You may obtain a copy of the License at:
			http://www.apache.org/licenses/LICENSE-2.0
			jackson-annotations
			Copyright (c) Fasterxml 2020
			This copy of Jackson JSON processor annotations is licensed under the Apache (Software) License, version 2.0 ("the License").
			See the License for details about distribution rights, and the specifing rights regarding derivate works.
			You may obtain a copy of the License at:
			http://www.apache.org/licenses/LICENSE-2.0
			jackson-databind
			Copyright (c) Fasterxml 2020
			This copy of Jackson JSON processor databind module is license under the Apache (Software) License, version 2.0 ("the License").
			See the License for details about distribution rights, and the speci rights regarding derivate works.
			You may obtain a copy of the License at:
			http://www.apache.org/licenses/LICENSE-2.0
			jakarta.xml-bind-api
			Eclipse Distribution License 1.0
			Copyright (c) 2017, 2018 Oracle and/or its affiliates. All rights reserved.
			Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
			<ul> <li>Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.</li> </ul>
			<ul> <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>
			<ul> <li>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.</li> </ul>
			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

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



Provider	Components	Version	Licensing information
			ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
			NOTICE file text for jakarta.xml-bind-api
			# Notices for Eclipse Project for JAXB
			This content is produced and maintained by the Eclipse Project fo JAXB project.
			* Project home: https://projects.eclipse.org/projects/ee4j.jaxb
			## Trademarks
			Eclipse Project for JAXB is a trademark of the Eclipse Foundation
			## Copyright
			All content is the property of the respective authors or their employers. For more information regarding authorship of content, please consult the listed source code repository logs.
			## Declared Project Licenses
			This program and the accompanying materials are made available under the terms of the Eclipse Distribution License v. 1.0 which is available at http://www.eclipse.org/org/documents/edl-v10.php.
			SPDX-License-Identifier: BSD-3-Clause
			## Source Code
			The project maintains the following source code repositories:
			* https://github.com/eclipse-ee4j/jaxb-api
			## Third-party Content
			This project leverages the following third party content.
			None
			## Cryptography
			Content may contain encryption software. The country in which y are currently may have restrictions on the import, possession, an 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 it this is permitted.
			inkerte activation oni
			jakarta.activation-api  Convright (c) 2018 Oracle and/or its affiliates. All rights reserved.
			Copyright (c) 2018 Oracle and/or its affiliates. All rights reserved.
			Eclipse Distribution License 1.0  NOTICE file text for jakarta.activation-api:
			# Notices for Eclipse Project for JAF
			This content is produced and maintained by the Eclipse Project for JAF project.
			* Project home: https://projects.eclipse.org/projects/ee4j.jaf
			## Copyright
			All content is the property of the respective authors or their employers. For more information regarding authorship of content please consult the listed source code repository logs.

please consult the listed source code repository logs.



Provider	Components	Version	Licensing information
			## Declared Project Licenses
			This program and the accompanying materials are made available under the terms of the Eclipse Distribution License v. 1.0, which is available at http://www.eclipse.org/org/documents/edl-v10.php.
			SPDX-License-Identifier: BSD-3-Clause
			## Source Code
			The project maintains the following source code repositories:
			*https://github.com/eclipse-ee4j/jaf
Glen Smith	OpenCSV	5.2	For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			Changes to original Implementation:
			ADD methods:
			Optional getException() to get the exception stored by ICSVWriter, AbstractCSVWriter or CSVWriter
			void ${\tt resetError}()$ to reset the exception stored by ICSVWriter, AbstractCSVWriter or CSVWriter
			ADD Test-Cases:
			<pre>getExceptionReturnsException() getExceptionReturnsExceptionUsingPrintWriter() resetException()</pre>
			resetError()
			to test the added methods
			Modifications Copyright (c) 2019 Kevin Kußmaul
			=======================================
			4th Party Dependencies
			commons-beanutils.commons-beanutils:1.9.4 (Apache 2.0)
			org.apache.commons.commons-lang3:3.10 (Apache 2.0)
			org.apache.commons.commons-text:1.8 (Apache 2.0)
			org.apache.commons.commons-collections4: 4.4 (Apache 2.0)
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
Info-ZIP	UnZip	6.0-43	For a copy of the license, see Info-ZIP UnZip License.
Infozip	zip	3.0	For a copy of the license, see Infozip Zip License.
Insecure	NMAP	7.90	For a copy of the license, see Insecure NMAP License, Version 7.90.
Jython	Jython	2.7.2	For a copy of the licenses, see The Jython License, Jython 2.0, 2 License, and JPython 1.1.x Software License.



Provider	Components	Version	Licensing information
Performa Evaluati Corpora (SPEC)	Standard	1.1	SPEC Fair Use Rules
	Performance Evaluation Corporation (SPEC) CPU		Updated 08 December 2020
			See www.spec.org/fairuse.html.
			SPEC Trademarks And Service Marks
	2017 benchmark results		See www.spec.org/spec/trademarks.html.
Oracle	Helidon	1.4.7	For a copy of the license, see Helidon License Information.
SNMP4J.org	SNMP4J	2.8.0	**************************************
			>>>> License SNMP4j
			**************************************
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			***************************************
			******
			Notice SNMP4j
			******
			=======================================
			== NOTICE file corresponding to the section 4 d of ==
			== the Apache License, Version 2.0, ==
			== in this case for the SNMP4J distribution.==
			=======================================
			This product includes software developed by SNMP4J.org (http://www.snmp4j.org/).
			Please read the different LICENSE files present in the root directory of this distribution.
			The names "SNMP4J" and "Apache Software Foundation" must no be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact info@snmp4j.org (SNMP4J) or apache@apache.org.
			**************************************
			>>>>> License Log4j
			**************************************
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			**************************************
			Notice Log4j
			******
			Apache log4j
			Copyright 2010 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).



Provider	Components	Version	Licensing information
SNMP4J.org	SNMP4J Agent	2.7.1	**************************************
			Notice SNMP4j Agent
			**************************************
			=======================================
			== NOTICE file corresponding to the section 4 d of ==
			== the Apache License, Version 2.0, ==
			== in this case for the SNMP4J distribution. ==
			This product includes software developed by SNMP4J.org (http://www.snmp4j.org/).
			Please read the different LICENSE files present in the root directory of this distribution.
			The names "SNMP4J", "SNMP4J-Agent" 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 info@snmp4j.org (SNMP4J) or apache@apache.org.
			**************************************
			Notice SNMP4j (Dependency)  ***********************************
			=======================================
			== NOTICE file corresponding to the section 4 d of ==
			== the Apache License, Version 2.0, ==
			== in this case for the SNMP4J distribution. ==
			This product includes software developed by SNMP4J.org (http://www.snmp4j.org/).
			Please read the different LICENSE files present in the root directory of this distribution.
			The names "SNMP4J" 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 info@snmp4j.org (SNMP4J) or apache@apache.org.
			**************************************
			Notice Log4j (dependency)
			Apache log4j
			Copyright 2010 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).



Provider	Components	Version	Licensing information
			**************************************
			>>>> License SNMP4j Agent ************************************
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			>>>> License SNMP4j
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			>>>>> License Log4j ************************************
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
Terence Parr	ANTLR4	4.7.2	For a copy of the license, see Antlr - v 4.7.2.



Provider	Components	Version	Licensing information
The Apache Software Foundation	HttpComponents	4.5.13	Apache HttpComponents Client
	HttpClient		Copyright 1999-2020 The Apache Software Foundation
			This product includes software developed at The Apache Software Foundation (http://www.apache.org/).
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
			This project includes Public Suffix List copied from licensed under the terms of the Mozilla Public License, v. 2.0
			For a copy of the license, see Mozilla Public License Version 2.0.
			4th party dependencies
			Apache HttpComponents Core
			From the Notice File:
			Apache HttpComponents Core
			Copyright 2005-2020 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).
			License File:
			Apache License Version 2.0
			Apache Commons Logging
			From the Notice File:
			Apache Commons Logging
			Copyright 2003-2014 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).
			License File:
			Apache License Version 2.0
			Apache Commons Codec
			From the Notice File:
			Apache Commons Codec
			Copyright 2002-2017 The Apache Software Foundation
			This product includes software developed at
			The Apache Software Foundation (http://www.apache.org/).
			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 <a href="http://stevemorse.org/phoneticinfo.htm">http://stevemorse.org/phoneticinfo.htm</a> with permission from the original authors. Original source copyright: Copyright (c) 2008 Alexander Beider & Stephen P. Morse
			the original authors. Original source copyright: Copyright (Alexander Beider & Stephen P. Morse.  License File:  Apache License Version 2.0



Provider	Components	Version	Licensing information
The Apache Software Foundation	Log4J	1.2.17-16	Apache log4j
			Copyright 2010 The Apache Software Foundation
			This product includes software developed at The Apache Software Foundation (http://www.apache.org/).
			For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.
The Legion Of The Bouncy Castle	Bouncy Castle Crypto API	1.62	For a copy of the license, see The Legion of the Bouncy Castle.
The MIT License (MIT)	JsonSurfer	1.6.0	MIT License
			Copyright (c) 2019 WANG Lingsong
			For a copy of the license, see The MIT License.
The Perl Foundation	perl	5.32.0	For a copy of the license, see The Perl License 5.32.0.
openssl.org	OpenSSL	1.1.1i	The OpenSSL toolkit stays under a double license, i.e. both the conditions of the OpenSSL License and the original SSLeay licens apply to the toolkit.
			See below for the actual license texts.
			For a copy of the license, see OpenSSL License.
			For a copy of the license, see Original SSLeay License.

### Antlr - v 4.7.2

antlr 4.7.2 COPYRIGHT and LICENSE:

[The "BSD 3-clause license"]
Copyright (c) 2012-2017 The ANTLR Project.
All rights reserved.

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

- 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 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.

=====

MIT License for codepointat.js from https://git.io/codepointat MIT License for fromcodepoint.js from https://git.io/vDWlm

Copyright Mathias Bynens

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.

\_\_\_\_\_

Modules:

runtime/Java
tool
antlr4-maven-plugin
tool-testsuite
runtime-testsuite/annotations
runtime-testsuite/processors
runtime-testsuite

\_\_\_\_\_

4P Dependencies:

com.ibm.icu » icu4j 58.2
COPYRIGHT and LICENSE:
 ICU License - ICU 1.8.1 and later

COPYRIGHT AND PERMISSION NOTICE

Copyright © 1995-2009 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.

---

org.abego.treelayout » org.abego.treelayout.core 1.0.3 COPYRIGHT and LICENSE: BSD 3-Clause License

Copyright (c) 2011, abego Software GmbH, Germany (http://www.abego.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:

- \* Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- \* Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- \* Neither the name of the copyright holder nor the names of 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.

---



org.antlr » antlr4-runtime 4.7.1
org.antlr » antlr-runtime 3.5.2
COPYRIGHT and LICENSE:
[The "BSD 3-clause license"]
Copyright (c) 2012-2017 The ANTLR Project. All rights reserved.

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

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

=====

MIT License for codepointat.js from https://git.io/codepointat MIT License for fromcodepoint.js from https://git.io/vDWlm

Copyright Mathias Bynens

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.

\_\_\_

org.antlr » ST4 4.0.8 COPYRIGHT and LICENSE:



```
[The "BSD license"]
Copyright (c) 2011-2013 Terence Parr
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.
- 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 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.

```
org.apache.maven » maven-plugin-api 3.0.5
org.apache.maven » maven-project 2.2.1
COPYRIGHT: Copyright 2001-2018 The Apache Software Foundation
LICENSE: Apache 2.0 https://github.com/apache/maven/blob/master/LICENSE

---
org.codehaus.plexus » plexus-compiler-api 2.2
COPYRIGHT: Copyright 2001-2005 The Apache Software Foundation.
LICENSE: Apache 2.0 http://www.apache.org/licenses/LICENSE-2.0

---
org.sonatype.plexus » plexus-build-api 0.0.7
COPYRIGHT: Copyright (c) 2008 Sonatype, Inc. All rights reserved.
LICENSE: Apache 2.0 http://www.apache.org/licenses/LICENSE-2.0

For a copy of the license,
see Apache Software Foundation Licenses, Version
2.0.
```

## Apache Software Foundation Licenses, Version 2.0

```
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.

### Common Public License - v 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.

## 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.

# 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.

# Eclipse Public License - v 2.0

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 content 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 changes or additions to the Program that are not Modified Works.

"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 or any Secondary License (as applicable), including Contributors.

"Derivative Works" shall mean any work, whether in Source Code or other form, that is based on (or derived from) the Program and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship.

"Modified Works" shall mean any work in Source Code or other form that results from an addition to, deletion from, or modification of the contents of the Program, including, for purposes of clarity any new file in Source Code form that contains any contents of the Program. Modified Works shall not include works that contain only declarations, interfaces, types, classes, structures, or files of the Program solely in each case in order to link to, bind by name, or subclass the Program or Modified Works thereof.



"Distribute" means the acts of a) distributing or b) making available in any manner that enables the transfer of a copy.

"Source Code" means the form of a Program preferred for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Secondary License" means either the GNU General Public License, Version 2.0, or any later versions of that license, including any exceptions or additional permissions as identified by the initial Contributor.

#### 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.
- 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 or other 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.
- e) Notwithstanding the terms of any Secondary License, no Contributor makes additional grants to any Recipient (other than those set forth in this Agreement) as a result of such Recipient's receipt of the Program under the terms of a Secondary License (if permitted under the terms of Section 3).

# 3. REQUIREMENTS

- 3.1 If a Contributor Distributes the Program in any form, then:
  - a) the Program must also be made available as Source Code, in



accordance with section 3.2, and the Contributor must accompany the Program with a statement that the Source Code for the Program is available under this Agreement, and informs Recipients how to obtain it in a reasonable manner on or through a medium customarily used for software exchange; and

- b) the Contributor may Distribute the Program under a license different than this Agreement, provided that such license:
  - i) effectively disclaims on behalf of all other 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 other Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;
  - iii) does not attempt to limit or alter the recipients' rights in the Source Code under section 3.2; and
  - iv) requires any subsequent distribution of the Program by any party to be under a license that satisfies the requirements of this section 3.
- 3.2 When the Program is Distributed as Source Code:
  - a) it must be made available under this Agreement, or if the Program (i) is combined with other material in a separate file or files made available under a Secondary License, and (ii) the initial Contributor attached to the Source Code the notice described in Exhibit A of this Agreement, then the Program may be made available under the terms of such Secondary Licenses, and
  - b) a copy of this Agreement must be included with each copy of the Program.
- 3.3 Contributors may not remove or alter any copyright, patent, trademark, attribution notices, disclaimers of warranty, or limitations of liability ("notices") contained within the Program from any copy of the Program which they Distribute, provided that Contributors may add their own appropriate notices.

# 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, AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, 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, AND TO THE EXTENT PERMITTED BY APPLICABLE LAW, 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. Nothing in this Agreement is intended to be enforceable by any entity that is not a Contributor or Recipient. No third-party beneficiary rights are created under this Agreement.

Exhibit A - Form of Secondary Licenses Notice

"This Source Code may also be made available under the following Secondary Licenses when the conditions for such availability set forth in the Eclipse Public License, v. 2.0 are satisfied: {name license(s), version(s), and exceptions or additional permissions here}."

Simply including a copy of this Agreement, including this Exhibit A is not sufficient to license the Source Code under Secondary Licenses.

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.

# GNU General Public License - v 2.0

GNU GENERAL PUBLIC LICENSE Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users. This General Public License applies to most of the Free Software



Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

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

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

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

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

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

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

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

GNU GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

O. 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

# GNU Lesser General Public License version 2.1

GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

# Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

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

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

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave

you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.



Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

GNU LESSER GENERAL PUBLIC LICENSE
TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

- O. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".
- A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

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

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

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1



above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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

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

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

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.



4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

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

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under



Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
  - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
  - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any



attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

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

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

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

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



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

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

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

### NO WARRANTY

- 15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

# END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

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



# Copyright (C)

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

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

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

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

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

Yoyodyne, Inc., hereby disclaims all copyright interest in the library `Frob' (a library for tweaking knobs) written by James Random Hacker.

```
, 1 April 1990
Ty Coon, President of Vice
```

That's all there is to it!

# Helidon License Information

```
***********

*** Copied from LT Public License & Copyright Notices ***

Copyright Notice

Copyright (c) 2017, 2019 Oracle and/or its affiliates.

All rights reserved.

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.

For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.

Mhind/Pounth/Nth Donty Attributions

Third/Fourth/Nth Party Attributions

-----



The following software (or certain identified files distributed with the software) may be included in this product. Unless otherwise specified, the software identified in this file is licensed under the licenses described below. The disclaimers and copyright notices provided are based on information made available to Oracle by the third party licensors listed.

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. For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.

-----

Diff Utils 2.2

\_\_\_\_\_

Copyright (C) 2009 - 2017 java-diff-utils Copyright java-diff-utils. Apache License, Version 2.0

\_\_\_\_\_

JGit - Core

\_\_\_\_\_

JGit - Core

Copyright (C) 2012 Chris Aniszczyk

Copyright (C) 2012 Google Inc. and others.

Copyright (C) 2012 IBM Corporation and others.

Copyright (C) 2012 Robin Rosenberg

Copyright (C) 2012, IBM Corporation and others.

Copyright (C) 2013 Chris Aniszczyk

Copyright (C) 2013 Christian Halstrick

Copyright (C) 2013 Google Inc.

Copyright (C) 2013 Google Inc., and others.

Copyright (C) 2013 Marc Strapetz

Copyright (C) 2013 Mathias Kinzler

Copyright (C) 2013 Robin Rosenberg

Copyright (C) 2013 Sasa Zivkov

Copyright (C) 2013 Shawn O. Pearce

Copyright (C) 2013, Google Inc.

Copyright (C) 2013, Mathias Kinzler Copyright (C) 2014 Shawn O. Pearce

Copyright (C) 2014, Google Inc.

Copyright (C) 2015 Shawn O. Pearce

Copyright (C) Abhishek Bhatnagar

Copyright (C) Alex Blewitt



Copyright (C) Alexey Kuznetsov Copyright (C) Andrey Loskutov Copyright (C) André de Oliveira Copyright (C) Arthur Daussy Copyright (C) Axel Richard Copyright (C) Charles O'Farrell Copyright (C) Chris Aniszczyk Copyright (C) Christian Halstrick Copyright (C) Christoph Brill Copyright (C) CloudBees, Inc. Copyright (C) Constantine Plotnikov Copyright (C) Daniel Megert Copyright (C) Dave Watson Copyright (C) Ericsson Copyright (C) Florian Köberle Copyright (C) GEBIT Solutions Copyright (C) Garmin International Copyright (C) GitHub Inc. Copyright (C) Google, Inc. Copyright (C) Gunnar Wagenknecht Copyright (C) Gustaf Lundh Copyright (C) IBM Corporation and others. Copyright (C) Ivan Motsch Copyright (C) Jens Baumgart Copyright (C) JetBrains s.r.o. Copyright (C) Johannes E. Schindelin Copyright (C) Johannes Schindelin Copyright (C) Jonas Fonseca Copyright (C) Kaloyan Raev Copyright (C) Ketan Padegaonkar Copyright (C) Konrad Kügler Copyright (C) Laurent Delaigue Copyright (C) Laurent Goujon Copyright (C) Marc Strapetz Copyright (C) Marek Zawirski Copyright (C) Mark Struberg Copyright (C) Mathias Kinzler Copyright (C) Matt Fischer Copyright (C) Matthias Sohn Copyright (C) Mike Ralphson Copyright (C) Mykola Nikishov Copyright (C) Obeo. Copyright (C) Patrick Steinhardt Copyright (C) Philipp Thun Copyright (C) Red Hat Inc. Copyright (C) Research In Motion Limited Copyright (C) Roberto Tyley Copyright (C) Robin Rosenberg Copyright (C) Robin Stocker Copyright (C) Roger C. Soares Copyright (C) Sasa Zivkov Copyright (C) Shawn O. Pearce Copyright (C) Stefan Lay Copyright (C) Thad Hughes Copyright (C) The Guava Authors Copyright (C) Tomasz Zarna Copyright (C) Tor Arne Vestbø Copyright (C) Vasyl' Vavrychuk Copyright (C) Yann Simon Copyright (c) Konrad Kügler

Eclipse Distribution License - v 1.0

```
For a copy of the license, see Eclipse Distribution License - v 1.0.
```

-----

Fourth Party Dependencies

-----

"JSch" 0.1.54 (com.jcraft:jsch)
Copyright (c) 2002-2016 ymnk, JCraft,Inc.
All rights reserved.
BSD-style 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.
- 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 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.

```
"SLF4J API Module" 1.7.2 (org.slf4j:slf4j-api)
Copyright (c) 2004-2011 QOS.ch
```

The MIT License SPDX short identifier: MIT

Further resources on the MIT License Copyright For a copy of the license, see The MIT License.

-----

"JavaEWAH" 1.1.6 (com.googlecode.javaewah:JavaEWAH)
Copyright 2009- 2016, Daniel Lemire, Cliff Moon,
David McIntosh, Robert Becho, Google Inc., Veronika Zenz,
Owen Kaser, Gregory Ssi-Yan-Kai, Rory Graves
Copyright 2012, Google Inc.
Apache License Version 2.0

"Apache HttpClient" 4.3.6 (org.apache.httpcomponents:httpclient)
Copyright 1999-2019 The Apache Software Foundation
Apache License Version 2.0

-----

\_\_\_\_\_

<sup>&</sup>quot;Apache HttpCore" 4.3.3 (org.apache.httpcomponents:httpcore) Copyright 2005-2018 The Apache Software Foundation



Apache License Version 2.0

\_\_\_\_\_

"Commons Logging" 1.1.3 (commons-logging:commons-logging)
Copyright 2003-2016 The Apache Software Foundation
Apache License Version 2.0

-----

"Commons Codec" 1.6 (commons-codec:commons-codec)
Copyright 2002-2019 The Apache Software Foundation
Apache License Version 2.0

.\_\_\_\_\_

\_\_\_\_\_

Java Annotation Indexer (jandex) 2.1.1.Final

Java Annotation Indexer (org.jboss:jandex) Copyright Red Hat, Inc., and individual contributors Apache License, Version 2.0

\_\_\_\_\_

FreeMarker 2.3.28

\_\_\_\_\_

Apache License, Version 2.0 Copyright 2015-2018 The Apache Software Foundation

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

FreeMarker 1.x was released under the LGPL license. Later, by community consensus, we have switched over to a BSD-style license. As of FreeMarker 2.2pre1, the original author, Benjamin Geer, has relinquished the copyright in behalf of Visigoth Software Society.

With FreeMarker 2.3.21 the license has changed to Apache License, Version 2.0, and the owner has changed from Visigoth Software Society to three of the FreeMarker 2.x developers, Attila Szegedi, Daniel Dekany, and Jonathan Revusky.

After FreeMarker 2.3.24-pre01 (2015-09-02), the owner changes to the Apache Software Foundation.

\_\_\_\_\_

DropWizard Metrics 3.2.3

-

Copyright 2010-2013 Coda Hale and Yammer, Inc., 2014-2015 Dropwizard Team
Apache License, Version 2.0

This product includes software developed by Coda Hale and Yammer, Inc.

This product includes code derived from the JSR-166 project (ThreadLocalRandom, Striped64, LongAdder), which was released with the following comments:



http://creativecommons.org/publicdomain/zero/1.0/ JGit 4.9.0.201710071750-r \_\_\_\_\_ http://www.eclipse.org/org/documents/edl-v10.php Eclipse Distribution License - v 1.0 For a copy of the license, see Eclipse Distribution License - v 1.0. MicroProfile Config API 1.3 \_\_\_\_\_ MicroProfile Config API (org.eclipse.microprofile.config:microprofile-config-api) Copyright (c) Contributors to the Eclipse Foundation Apache License, Version 2.0 This product includes software developed at The Apache Software Foundation (http://www.apache.org/). Portions of this software were originally based on the following: \* Apache DeltaSpike Config https://deltaspike.apache.org under Apache License, v2.0 SPDXVersion: SPDX-2.1 PackageName: Eclipse Microprofile PackageHomePage: http://www.eclipse.org/microprofile PackageLicenseDeclared: Apache-2.0 PackageCopyrightText: Mark Struberg struberg@apache.org, Gerhard Petracek gpetracek@apache.org, Romain Manni-Bucau rmannibucau@apache.org, Ron Smeral rsmeral@apache.org, Emily Jiang emijiang@uk.ibm.com, Ondrej Mihalyi ondrej.mihalyi@gmail.com, Gunnar Morling gunnar@hibernate.org \_\_\_\_\_ "org.osgi:org.osgi.annotation.versioning" 1.0.0 (org.osgi:org.osgi.annotation.versioning) Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved. Copyright (c) OSGi Alliance (2013). All Rights Reserved. MicroProfile Health API 2.1 \_\_\_\_\_ MicroProfile Health API (org.eclipse.microprofile.health:microprofile-health-api) Copyright (c) 2017, 2019 Contributors to the Eclipse Foundation Apache License, Version 2.0 This product includes software developed at The Apache Software Foundation (http://www.apache.org/). SPDXVersion: SPDX-2.1

PackageName: Eclipse Microprofile

```
PackageHomePage: http://www.eclipse.org/microprofile
PackageLicenseDeclared: Apache-2.0
PackageCopyrightText:
Heiko Braun hbraun@redhat.com
_____
"org.osgi:org.osgi.annotation.versioning" 1.0.0
 (org.osgi:org.osgi.annotation.versioning)
 Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved.
 Copyright (c) OSGi Alliance (2013). All Rights Reserved.
Apache License, Version 2.0
_____
MicroProfile Metrics API 1.1
MicroProfile Metrics API 2.2
______
MicroProfile Metrics API
(org.eclipse.microprofile.metrics:microprofile-metrics-api)
 Copyright (c) 2017 Contributors to the Eclipse Foundation
 Copyright (c) 2016-2019 Eclipse Microprofile Contributors
Apache License, Version 2.0
Portions of this software were originally based on the
following:
* Dropwizard Metrics
 http://metrics.dropwizard.io/3.2.3/
 under Apache License, v2.0
* CDI Extension for Metrics by Antonin Stefanutti
  https://github.com/astefanutti/metrics-cdi
 under Apache License, v2.0
SPDXVersion: SPDX-2.1
PackageName: Eclipse Microprofile
PackageHomePage: http://www.eclipse.org/microprofile
PackageLicenseDeclared: Apache-2.0
PackageCopyrightText:
Heiko Rupp hrupp@redhat.com,
Raymond Lam lamr@ca.ibm.com,
Brennan Nichyporuk brennan.nichyporuk@gmail.com,
David Chan chdavid@ca.ibm.com,
Don Bourne dbourne@ca.ibm.com,
Antonin Stefanutti antonin@stefanutti.fr,
Arjun Sharma arjun.a.sharma@ibm.com,
Fahham Khan fahhamk@ca.ibm.com,
Felix Wong fmhwong@ca.ibm.com,
Mike Croft mike.croft@payara.fish,
Werner Keil werner@catmedia.us
-----
Fourth Party Dependencies
-----
"org.osgi:org.osgi.annotation.versioning" 1.0.0
(org.osgi:org.osgi.annotation.versioning)
Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved.
Copyright (c) OSGi Alliance (2013). All Rights Reserved.
Apache License, Version 2.0
MicroProfile Config API
Copyright (c) Contributors to the Eclipse Foundation
```

```
Apache License Version 2.0
______
MicroProfile Fault Tolerance API 2.0.2
______
Copyright (c) 2017 Contributors to the Eclipse Foundation
Apache License, Version 2.0
"org.osgi:org.osgi.annotation.versioning" 1.0.0
(org.osgi:org.osgi.annotation.versioning)
Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved.
Copyright (c) OSGi Alliance (2013). All Rights Reserved.
Apache License, Version 2.0
_____
MicroProfile Open Tracing API 1.3.1
_____
Copyright (c) 2017, 2019 Contributors to the Eclipse Foundation
Copyright (c) 2017,2018 Contributors to the Eclipse Foundation
Apache License, Version 2.0
"org.osgi:org.osgi.annotation.versioning" 1.0.0
(org.osgi:org.osgi.annotation.versioning)
Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved.
Copyright (c) OSGi Alliance (2013). All Rights Reserved.
Apache License, Version 2.0
MicroProfile Rest Client API 1.3.3
_____
Copyright (c) 2016-2019 Contributors to the Eclipse Foundation
Apache License, Version 2.0
_____
MicroProfile OpenAPI API 1.1.2
_____
Copyright (c) 2017,2019 Contributors to the Eclipse Foundation
Copyright (c) 2017 Contributors to the Eclipse Foundation
Copyright 2017 SmartBear Software
The majority of this software were originally based on the
following:
* Swagger Core
 https://github.com/swagger-api/swagger-core
 under Apache License, v2.0
SPDXVersion: SPDX-2.1
PackageName: Eclipse MicroProfile
PackageHomePage: http://www.eclipse.org/microprofile
PackageLicenseDeclared: Apache-2.0
PackageCopyrightText:
Arthur De Magalhaes arthurdm@ca.ibm.com
_____
Small Rye Open API 1.1.1
_____
SmallRye: MicroProfile OpenAPI Implementation
(io.smallrye:smallrye-open-api)
Copyright 2018 Red Hat, Inc.
```

```
Copyright 2017, 2018 Red Hat, Inc, and individual contributors.
_____
"MicroProfile OpenAPI API" 1.1.2
(org.eclipse.microprofile.openapi:microprofile-openapi-api)
Copyright 2017 SmartBear Software
Copyright (c) 2017 Contributors to the Eclipse Foundation
Apache License Version 2
"org.osgi:org.osgi.annotation.versioning" 1.0.0
(org.osgi:org.osgi.annotation.versioning)
Copyright (c) OSGi Alliance (2013, 2014). All Rights Reserved.
Copyright (c) OSGi Alliance (2013). All Rights Reserved.
Apache License Version 2
_____
"MicroProfile Config API" 1.3
(org.eclipse.microprofile.config:microprofile-config-api)
Copyright (c) 2009-2017 Contributors to the Eclipse Foundation
Apache License Version 2
_____
"Jackson-core" 2.9.8
(com.fasterxml.jackson.core:jackson-core)
Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
Copyright 2009-2011 FasterXML, LLC.
All rights reserved unless otherwise indicated.
Apache License Version 2
"jackson-databind" 2.9.8
(com.fasterxml.jackson.core:jackson-databind)
Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
Copyright 2009-2011 FasterXML, LLC.
All rights reserved unless otherwise indicated.
Apache License Version 2
"Jackson-annotations" 2.9.0
(com.fasterxml.jackson.core:jackson-annotations)
Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
Copyright 2009-2011 FasterXML, LLC.
All rights reserved unless otherwise indicated.
Apache License Version 2
_____
"Jackson-dataformat-YAML" 2.9.8
(com.fasterxml.jackson.dataformat:jackson-dataformat-yaml)
Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
Copyright 2009-2011 FasterXML, LLC.
All rights reserved unless otherwise indicated.
Apache License Version 2
_____
"SnakeYAML" 1.23 (org.yaml:snakeyaml)
Copyright 2003-2010 Christian d'Heureuse,
Inventec Informatik AG, Zurich, Switzerland
Copyright (c) 2008, http://www.snakeyaml.org
Apache License Version 2
"Java Annotation Indexer" 2.1.1.Final
(org.jboss:jandex)
Copyright 2013,2014 Red Hat, Inc.,
and individual contributors
Apache License Version 2
"JBoss Logging 3" 3.3.2.Final
(org.jboss.logging:jboss-logging)
Copyright 2010, 2017 Red Hat, Inc.
```



```
Copyright 2010,2011 Red Hat, Inc.,
and individual contributors
Apache License Version 2
-----
"ShrinkWrap API" 1.2.6
(org.jboss.shrinkwrap:shrinkwrap-api)
Copyright 2009, 2012 Red Hat Middleware LLC,
and individual contributors
Apache License Version 2
-----
"Apache Commons IO" 2.6
(commons-io:commons-io)
Copyright 2002-2017 The Apache Software Foundation
Apache License Version 2
"Apache Commons BeanUtils" 1.9.3
(commons-beanutils:commons-beanutils)
Copyright 2000-2018 The Apache Software Foundation
Apache License Version 2
"Apache Commons Logging" 1.2
(commons-logging:commons-logging)
Copyright The Apache Software Foundation
Apache License Version 2
"Apache Commons Collections" 3.2.2
(commons-collections:commons-collections)
Copyright 2001-2018 The Apache Software Foundation
Apache License Version 2
Google Guava 28.1
COPYRIGHT: Copyright (C) 2008 The Guava Authors
Apache License, Version 2.0
_____
Fourth Party Dependencies:
_____
com.google.code.findbugs jsr305 3.0.2
COPYRIGHT: (C) University of Maryland
The JSR-305 reference implementation (lib/jsr305.jar)
is distributed under the terms of the New BSD
license:
 http://www.opensource.org/licenses/bsd-license.php
See the JSR-305 home page for more information:
http://code.google.com/p/jsr-305/
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.

\_\_\_

com.google.errorprone error\_prone\_annotations 2.3.0
COPYRIGHT: Copyright 2017 The Error Prone Authors.
LICENSE:

---

com.google.guava failureaccess 1.0.1
(part of google guava 28.1-jre. same license and copyright)

com.google.guava listenablefuture 9999.0-empty-...
(part of google guava 28.1-jre. same license and copyright)

com.google.j2objc j2objc-annotations 1.3 COPYRIGHT: (C) Daniel Connelly and Google, Inc.

LICENSE:
Apache 2.0 https://github.com/google/j2objc/blob/1.1/LICENSE

org.checkerframework checker-qual 2.8.1, MIT license COPYRIGHT: Copyright 2004-present by the Checker Framework developers

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

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

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



```
javaparser 3.14.14
 Copyright (C) 2007-2010 Jlio Vilmar Gesser.
 Copyright (C) 2011, 2013-2016 The JavaParser Team.
 JavaParser is available either under the terms of the LGPL 3
 License or the Apache 2.0 License. You as the user are
 entitled to choose the terms under which to adopt
 JavaParser.
org.codehaus.mojo animal-sniffer-annotations 1.18
Copyright (c) 2009 codehaus.org.
The MIT License
_____
OpenTracing gRPC
_____
io.opentracing.contrib:opentracing-grpc
(io.opentracing.contrib:opentracing-grpc)
 Copyright 2017-2019 The OpenTracing Authors
 Apache License, Version 2.0
Fourth Party Dependencies
"OpenTracing API" (io.opentracing:opentracing-api)
 Copyright 2016-2019 The OpenTracing Authors
 Apache License Version 2.0
"OpenTracing-util" (io.opentracing:opentracing-util)
 Copyright 2016-2019 The OpenTracing Authors
 Apache License Version 2.0
 -----
"OpenTracing-noop" (io.opentracing:opentracing-noop)
 Copyright 2016-2019 The OpenTracing Authors
 Apache License Version 2.0
_____
Apache HttpComponents HttpClient 4.5.8
_____
Copyright: Copyright 1999-2019 The Apache Software Foundation
Apache License Version 2.0
This project includes Public Suffix List
licensed under the terms of the Mozilla Public License, v. 2.0
Fourth Party Dependencies
-----
commons-codec commons-codec 1.11, commons-codec-1.12.jar
 Copyright 2002-2017 The Apache Software Foundation
 Apache License Version 2.0
commons-logging commons-logging 1.2
  Copyright 2003-2014 The Apache Software Foundation
 Apache License Version 2.0
  -----
org.apache.httpcomponents httpcore 4.4.11
  Copyright 2005-2019 The Apache Software Foundation
 Apache License Version 2.0
commons-lang3-3.9.jar
 Copyright 2005-2019 The Apache Software Foundation
 Apache License Version 2.0
```



grpc-java 1.25.0

-----Copyright 2014 The gRPC Authors

Apache License, Version 2.0

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.

\_\_\_\_\_

This product contains a modified portion of 'OkHttp', an open source HTTP & SPDY client for Android and Java applications, which can be obtained at:

- \* LICENSE:
  - \* Apache License 2.0
- \* HOMEPAGE:
  - \* https://github.com/square/okhttp
- \* LOCATION IN GRPC:
  - \* okhttp/third party/okhttp

This product contains a modified portion of 'Netty', an open source networking library, which can be obtained at:

- \* LICENSE:
  - \* Apache License 2.0
- \* HOMEPAGE:
  - \* https://netty.io
- \* LOCATION\_IN\_GRPC:
  - \* netty/third party/netty

\_\_\_\_\_

Google APIs Client Library for Java

Google APIs Client Library for Java (com.google.api-client:google-api-client) Copyright 2010,2015 Google Inc. Copyright 2015, Google Inc. All rights reserved. Apache License Version 2

Fourth Party Dependencies

-----

"Animal Sniffer Annotations" 1.17
(org.codehaus.mojo:animal-sniffer-annotations)
Copyright (c) 2009 codehaus.org.
Copyright (c) 2008 Kohsuke Kawaguchi and codehaus.org.

The MIT License SPDX short identifier: MIT

```
Further resources on the MIT License Copyright
For a copy of the license,
see The MIT License.
"io.grpc:grpc-context" 1.22.1 (io.grpc:grpc-context)
 Copyright 2015, 2017 The gRPC Authors
 Apache License Version 2
"Google OAuth Client Library for Java" 1.30.4
(com.google.oauth-client:google-oauth-client)
 Copyright (c) 2010,2013 Google Inc.
 Apache License Version 2
"Google HTTP Client Library for Java" 1.32.1
(com.google.http-client:google-http-client)
 Copyright (c) 2010,2018 Google Inc.
 Copyright (c) 2010 Google Inc.J
 Copyright 2012 Google LLC
 Copyright 2012 Google LLC.
 Apache License Version 2
"FindBugs-jsr305" 3.0.2 (com.google.code.findbugs:jsr305)
Copyright (c) JSR305 expert group
 Apache License Version 2
"Apache HttpCore" 4.4.12 (org.apache.httpcomponents:httpcore)
 Copyright 2005-2019 The Apache Software Foundation
 Apache License Version 2
"OpenCensus" 0.24.0 (io.opencensus:opencensus-api)
 Copyright 2017,2019 OpenCensus Authors
 Copyright 2016- 17, OpenCensus Authors
 Apache License Version 2
"OpenCensus" 0.24.0 (io.opencensus:opencensus-contrib-http-util)
 Copyright 2017,2018 OpenCensus Authors
 Apache License Version 2
_____
"Jackson 2 extensions to the Google HTTP Client Library for Java."
1.32.1 (com.google.http-client:google-http-client-jackson2)
 Copyright (c) 2012 Google Inc.
 Apache License Version 2
_____
"Jackson-core" 2.9.9 (com.fasterxml.jackson.core:jackson-core)
Copyright (c) Tatu Saloranta, tatu.saloranta@iki.fi
_____
"Guava: Google Core Libraries for Java" 28.0-android
(com.google.guava:guava)
 Copyright (C) 2005,2018 The Guava Authors
 Apache License Version 2
"Guava InternalFutureFailureAccess and InternalFutures"
1.0.1 (com.google.guava:failureaccess)
 Copyright (C) 2018 The Guava Authors
 Apache License Version 2
"Guava ListenableFuture only" 9999.0-empty-to-avoid-conflict-with-guava
(com.google.guava:listenablefuture)
 Copyright (C) 2018 The Guava Authors
 Apache License Version 2
```



```
"error-prone annotations" 2.3.2
(com.google.errorprone:error prone annotations)
  Copyright 2014,2017 The Error Prone Authors.
 Apache License Version 2
"J2ObjC Annotations" 1.3 (com.google.j2objc:j2objc-annotations)
  Copyright 2012 Google Inc. All Rights Reserved.
  Apache License Version 2
_____
______
Jedis 2.9.0
_____
Jedis 2.9.0
Copyright (c) 2010 Jonathan Leibiusky
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.
_____
Apache Commons Pool 2.4.3
Copyright 2001-2018 The Apache Software Foundation
This product includes software developed at
The Apache Software Foundation (http://www.apache.org/).
Apache License, Version 2.0
_____
etcd4j 2.17.0
_____
```

Copyright (c) 2015, Jurriaan Mous and contributors as indicated by the  $\theta$ author tags.

Apache License Version 2.0

.----

Fourth Party Dependencies

\_\_\_\_\_

"minimal-json" (com.eclipsesource.minimal-json:minimal-json) Copyright (c) 2013,2017 EclipseSource.

The MIT License SPDX short identifier: MIT

Further resources on the MIT License Copyright For a copy of the license,



# see The MIT License.

```
"SLF4J API Module" (org.slf4j:slf4j-api)
 Copyright (c) 2004-2011 QOS.ch
 The MIT License
 -----
"Netty" (io.netty:netty-*)
 Copyright 2015,2016 The Netty Project
 Copyright (c) 2011, Joe Walnes and contributors
 Copyright 2012,2017 The Netty Project
 Copyright (c) 2008-2009 Bjoern Hoehrmann
 Copyright 2011,2018 The Netty Project
 Copyright (c) 2004-2011 QOS.ch
 Copyright 2014,2018 The Netty Project
 Apache License Version 2.0
 Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi
 Apache License Version 2.0
"json-flattener" (com.github.wnameless:json-flattener)
 Copyright 2015,2018 Wei-Ming Wu
 Apache License Version 2.0
_____
"Apache Commons Text" (org.apache.commons:commons-text)
 Copyright 2001-2019 The Apache Software Foundation
 Apache License Version 2.0
-----
"Apache Commons Lang" (org.apache.commons:commons-lang3)
 Copyright 2001-2019 The Apache Software Foundation
 Apache License Version 2.0
_____
Zipkin OpenTracing Brave
Zipkin OpenTracing Brave
(io.opentracing.brave:brave-opentracing)
_____
Copyright 2016-2019 The OpenZipkin Authors
Apache License, Version 2.0
io.zipkin.brave:brave
Copyright 2013-2019 The OpenZipkin Authors
Apache License Version 2.0
_____
OpenTracing Java Bridge for Zipkin 0.30.0
Copyright 2016-2019 The OpenZipkin Authors
Apache License Version 2.0
Fourth Party Dependencies
"Zipkin Core Library" 2.19.0 (io.zipkin.zipkin2:zipkin)
 Copyright 2015-2019 The OpenZipkin Authors
 Apache License Version 2.0
```



```
"OkHttp" 3.14.3 (com.squareup.okhttp3:okhttp)
 Copyright 2019 Square, Inc.
 Apache License Version 2.0
  _____
"Micrometer Application Metrics" 1.2.1 (io.micrometer:micrometer-core)
  Copyright 2019 Pivotal Software, Inc.
 Copyright 2018 Pivotal Software, Inc.
 Copyright 2017 Pivotal Software, Inc.
 Copyright 2017 The Netty Project
 Copyright 2013 The Netty Project
 Copyright 2012 The Netty Project
 Copyright (c) 2004-2011 QOS.ch
 Apache License Version 2.0
ActiveMQ Client 5.15.10 (org.apache.activemq:activemq-client)
 Copyright 2005-2019 Apache Software Foundation
 Apache License Version 2.0
Apache Kafka Client 2.3.0, 0.8.2.2 (org.apache.kafka:kafka-clients)
 Copyright 2015 The Apache Software Foundation.
 Copyright 2019 The Apache Software Foundation.
 Apache License Version 2.0
Apache Thrift 0.12.0 (org.apache.thrift:libthrift)
 Copyright 2018 The Apache Software Foundation.
 Apache License Version 2.0
.....
Spring Framework: Beans 2.5.6 (org.springframework:spring-beans)
 Copyright 2002-2008 the original author or authors.
 Apache License Version 2.0
 -----
"RabbitMQ Java Client" 4.11.3 (com.rabbitmq:amqp-client)
 Copyright (c) 2007-Present Pivotal Software, Inc.
 All rights reserved.
 Apache License version 2.0
_____
Zipin Reporter Java 2.11.1
_____
Copyright 2016-2018 The OpenZipkin Authors
Apache License, Version 2.0
"Zipkin Reporter: Core" 2.6.0 (io.zipkin.reporter2:zipkin-reporter)
Copyright 2016-2018 The OpenZipkin Authors
Apache License, Version 2.0
_____
"Zipkin v2" 2.8.1 (io.zipkin.zipkin2:zipkin)
Copyright 2015-2018 The OpenZipkin Authors
Apache License, Version 2.0
 -----
"Zipkin Reporter: Core" 2.6.0 (io.zipkin.reporter2:zipkin-reporter)
"Zipkin v2" 2.8.1 (io.zipkin.zipkin2:zipkin)
Copyright 2016-2018 The OpenZipkin Authors
Apache License, Version 2.0
Opentracing API for Java 0.32.0
______
OpenTracing-util (io.opentracing:opentracing-util)
Copyright The OpenTracing Authors
```



```
Apache License, Version 2.0
"OpenTracing API" 0.32.0 (io.opentracing:opentracing-api)
Copyright The OpenTracing Authors
Apache License, Version 2.0
-----
"OpenTracing-noop" 0.32.0 (io.opentracing:opentracing-noop)
Copyright The OpenTracing Authors
Apache License, Version 2.0
OpenTracing Java Mock Tracer 0.31.0
_____
OpenTracing-mock (io.opentracing:opentracing-mock)
Copyright The OpenTracing Authors
Apache License, Version 2.0
_____
"OpenTracing API" 0.31.0 (io.opentracing:opentracing-api)
Copyright The OpenTracing Authors
Apache License, Version 2.0
"OpenTracing-noop" 0.31.0 (io.opentracing:opentracing-noop)
Copyright The OpenTracing Authors
Apache License, Version 2.0
"OpenTracing-util" 0.31.0 (io.opentracing:opentracing-util)
Copyright The OpenTracing Authors
Apache License, Version 2.0
_____
OpenTracing-Java Utilities 0.31.0
_____
OpenTracing-util (io.opentracing:opentracing-util)
Copyright The OpenTracing Authors
Apache License, Version 2.0
"OpenTracing API" 0.31.0 (io.opentracing:opentracing-api)
Copyright The OpenTracing Authors
Apache License, Version 2.0
_____
"OpenTracing-noop" 0.31.0 (io.opentracing:opentracing-noop)
Copyright The OpenTracing Authors
Apache License, Version 2.0
_____
Jaeger Tracing Client 0.34.0
_____
jaeger-client (io.jaegertracing:jaeger-client)
Copyright (c) 2018, The Jaeger Authors
Copyright (c) 2016- 2018, The Jaeger Authors
Copyright (c) 2016, Uber Technologies, Inc
Apache License, Version 2.0
"SLF4J API Module" 1.7.25 (org.slf4j:slf4j-api)
Copyright (c) 2004-2011 QOS.ch
Apache License, Version 2.0
"Apache Thrift" 0.12.0 (org.apache.thrift:libthrift)
Copyright The Apache Software Foundation
```



```
Apache License, Version 2.0
_____
"OkHttp" 3.9.0 (com.squareup.okhttp3:okhttp)
Copyright 2013 Twitter, Inc.
Copyright (C) 2012,2017 Square, Inc.
Copyright (C) 2010,2012 The Android Open Source Project
Apache License, Version 2.0
"Okio" 1.13.0 (com.squareup.okio:okio)
Copyright 2014 Square Inc.
Copyright (C) 2014,2017 Square, Inc.
Apache License, Version 2.0
"OpenTracing API" 0.31.0 (io.opentracing:opentracing-api)
Copyright 2016-2018 The OpenTracing Authors
Apache License, Version 2.0
"OpenTracing-util" 0.31.0 (io.opentracing:opentracing-util)
Copyright 2016-2018 The OpenTracing Authors
Apache License, Version 2.0
"OpenTracing-noop" 0.31.0 (io.opentracing:opentracing-noop)
Copyright 2016-2018 The OpenTracing Authors
Apache License, Version 2.0
"Gson" 2.8.2 (com.google.code.gson:gson)
Copyright (C) 2008,2014 Google Inc.
Copyright (C) 2010 The Android Open Source Project
Apache License, Version 2.0
"Tracer resolver" 0.1.5
(io.opentracing.contrib:opentracing-tracerresolver)
Copyright 2017-2018 The OpenTracing Authors
Apache License, Version 2.0
______
SLF4J 1.7.15
SLF4J API Module (org.slf4j:slf4j-api)
Copyright (c) QOS.ch
_____
The MIT License SPDX short identifier: MIT
Further resources on the MIT License Copyright
For a copy of the license, see The MIT License.
SLF4J JDK14 Binding (org.slf4j:slf4j-jdk14)
Copyright (c) QOS.ch
The MIT License SPDX short identifier: MIT
Further resources on the MIT License Copyright
For a copy of the license, see The MIT License.
_____
"SLF4J API Module" 1.7.25 (org.slf4j:slf4j-api)
Copyright (c) QOS.ch
The MIT License SPDX short identifier: MIT
```



Further resources on the MIT License Copyright For a copy of the license, see The MIT License.

\_\_\_\_\_

Weld SE (Core) 3.1.1.Final

Weld SE (Core) (org.jboss.weld.se:weld-se-core)
Copyright 2009, Red Hat, Inc. and/or its affiliates, and individual
Copyright 2008,2016 Red Hat Middleware LLC, and individual
contributors

Copyright 2009 Sun Microsystems, Inc. All rights reserved. Copyright 2015,2016 Red Hat, Inc., and individual contributors

\_\_\_\_\_

### netty 4.1.45.Final

\_\_\_\_\_

Copyright 2012,2019 The Netty Project
Copyright 2011,2018 The Netty Project
Copyright 2014,2017 The Netty Project
Copyright 2012,2017 The Netty Project
Copyright 2012,2016 The Netty Project
Copyright 2014 Twitter, Inc.
Copyright (c) 2011, Joe Walnes and contributors
Copyright (c) 2008-2009 Bjoern Hoehrmann
Copyright (c) 2004-2011 QOS.ch

The Netty Project

Please visit the Netty web site for more information:

\* https://netty.io/

Copyright 2014 The Netty Project

The Netty Project 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.

Also, please refer to each LICENSE..txt file, which is located in the 'license' directory of the distribution file, for the license terms of the components that this product depends on.

For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.

-----

This product contains the extensions to Java Collections Framework which has been derived from the works by JSR-166 EG, Doug Lea, and Jason T. Greene:

#### \* LICENSE:

\* license/LICENSE.jsr166y.txt (Public Domain)

The person or persons who have associated work with this document (the "Dedicator" or "Certifier") hereby either (a) certifies that, to the best of his knowledge, the work of authorship identified is in the public domain of the country from which the work is published, or (b) hereby dedicates whatever copyright the dedicators holds in the work of authorship identified below (the "Work") to the public domain. A certifier, moreover, dedicates any copyright interest he may have in the associated work, and for these purposes, is described as a "dedicator" below.

A certifier has taken reasonable steps to verify the copyright status of this work. Certifier recognizes that his good faith efforts may not shield him from liability if in fact the work certified is not in the public domain.

Dedicator makes this dedication for the benefit of the public at large and to the detriment of the Dedicator's heirs and successors. Dedicator intends this dedication to be an overt act of relinquishment in perpetuity of all present and future rights under copyright law, whether vested or contingent, in the Work. Dedicator understands that such relinquishment of all rights includes the relinquishment of all rights to enforce (by lawsuit or otherwise) those copyrights in the Work.

Dedicator recognizes that, once placed in the public domain, the Work may be freely reproduced, distributed, transmitted, used, modified, built upon, or otherwise exploited by anyone for any purpose, commercial or non-commercial, and in any way, including by methods that have not yet been invented or conceived.

- \* HOMEPAGE:
- \* http://gee.cs.oswego.edu/cgi-bin/viewcvs.cgi/jsr166/
- \* http://viewvc.jboss.org/cgi-bin/viewvc.cgi/jbosscache/experimental/jsr166/

-----

This product contains a modified version of Robert Harder's Public Domain Base64 Encoder and Decoder, which can be obtained at:

#### \* LICENSE:

\* license/LICENSE.base64.txt (Public Domain)

The person or persons who have associated work with this document (the "Dedicator" or "Certifier") hereby either (a) certifies that, to the best of his knowledge, the work of authorship identified is in the public domain of the country from which the work is published, or (b) hereby dedicates whatever copyright the dedicators holds in the work of authorship identified below (the "Work") to the public domain. A certifier, moreover, dedicates any copyright interest he may have in the associated work, and for these purposes, is described as a "dedicator" below.

A certifier has taken reasonable steps to verify the copyright status of this work. Certifier recognizes that his good faith efforts may not shield him from liability if in fact the work certified is not in the public domain.

Dedicator makes this dedication for the benefit of the public at large and to the detriment of the Dedicator's heirs and successors. Dedicator intends this dedication to be an overt act of relinquishment in perpetuate of all present and future rights under copyright law, whether vested or contingent, in the Work. Dedicator understands that such relinquishment of all rights includes the relinquishment of all rights to enforce (by lawsuit or otherwise) those copyrights in the Work.

Dedicator recognizes that, once placed in the public domain, the Work may be freely reproduced, distributed, transmitted, used, modified, built upon, or otherwise exploited by anyone for any purpose, commercial or non-commercial, and in any way, including by methods that have not yet been invented or conceived.

\* HOMEPAGE:

\* http://iharder.sourceforge.net/current/java/base64/

-----

This product contains a modified portion of 'Webbit', an event based WebSocket and HTTP server, which can be obtained at:

\* LICENSE:

\* license/LICENSE.webbit.txt (BSD License)
(BSD License: http://www.opensource.org/licenses/bsd-license)

Copyright (c) 2011, Joe Walnes, Aslak Hellesøy and contributors 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 Webbit 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.

\* HOMEPAGE:

\* https://github.com/joewalnes/webbit

-----

This product contains a modified portion of 'SLF4J', a simple logging facade for Java, which can be obtained at:

\* LICENSE:

\* license/LICENSE.slf4j.txt (MIT License)

/:



```
* Copyright (c) 2004-2007 QOS.ch
* All rights reserved.
^{\star} Permission is hereby granted, free of charge, to any person obtaining
* a copy of this software and associated documentation files (the
^{\star} "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
* 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.
  * HOMEPAGE:
   * http://www.slf4j.org/
This product contains a modified portion of 'Apache Harmony', an open source
```

Java SE, which can be obtained at:

\* NOTICE:

\* license/NOTICE.harmony.txt

Apache Harmony

Copyright 2006, 2010 The Apache Software Foundation.

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

\* LICENSE:

\* license/LICENSE.harmony.txt (Apache License 2.0)

\* HOMEPAGE:

\* http://archive.apache.org/dist/harmony/

This product contains a modified portion of 'jbzip2', a Java bzip2 compression and decompression library written by Matthew J. Francis. It can be obtained at:

\* LICENSE:

\* license/LICENSE.jbzip2.txt (MIT License) Copyright (c) 2010-2011 Matthew J. Francis and Contributors of the jbzip2 Project

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.

#### \* HOMEPAGE:

\* https://code.google.com/p/jbzip2/

\_\_\_\_\_

This product contains a modified portion of 'libdivsufsort', a C API library to construct the suffix array and the Burrows-Wheeler transformed string for any input string of a constant-size alphabet written by Yuta Mori. It can be obtained at:

#### \* LICENSE:

\* license/LICENSE.libdivsufsort.txt (MIT License) Copyright (c) 2003-2008 Yuta Mori 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.

#### \* HOMEPAGE:

\* https://github.com/y-256/libdivsufsort

-----

This product contains a modified portion of Nitsan Wakart's 'JCTools', Java Concurrency Tools for the JVM, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.jctools.txt (ASL2 License)
- \* HOMEPAGE:
  - \* https://github.com/JCTools/JCTools

This product optionally depends on 'JZlib', a re-implementation of zlib in pure Java, which can be obtained at:

#### \* LICENSE:

\* license/LICENSE.jzlib.txt (BSD style License)
Copyright (c) 2000,2001,2002,2003,2004 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.

#### \* HOMEPAGE:

\* http://www.jcraft.com/jzlib/

This product optionally depends on 'Compress-LZF', a Java library for encoding and decoding data in LZF format, written by Tatu Saloranta.

It can be obtained at:

#### \* LICENSE:

\* license/LICENSE.compress-lzf.txt (Apache License 2.0) Copyright 2009-2010 Ning, 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.

### \* HOMEPAGE:

\* https://github.com/ning/compress

This product optionally depends on 'lz4', a LZ4 Java compression and decompression library written by Adrien Grand. It can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.lz4.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* https://github.com/jpountz/lz4-java

This product optionally depends on 'lzma-java', a LZMA Java compression

and decompression library, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.lzma-java.txt (Apache License 2.0)
- \* HOMEPAGE:



\* https://github.com/jponge/lzma-java

Copyright (c) 2010-2011 Julien Ponge. All rights reserved.

Copyright (c) 2011 Tamas Cservenak. All rights reserved.

Copyright (c) 2009 Julien Ponge. All rights reserved.

\_\_\_\_\_\_

This product contains a modified portion of 'jfastlz', a Java port of FastLZ compression and decompression library written by William Kinney. It can be obtained at:

\* LICENSE:

\* license/LICENSE.jfastlz.txt (MIT License)

The MIT License

Copyright (c) 2009 William Kinney For a copy of the license, see The MIT License.

\* HOMEPAGE:

\* https://code.google.com/p/jfastlz/

\_\_\_\_\_

This product contains a modified portion of and optionally depends on 'Protocol Buffers', Google's data interchange format, which can be obtained at:

\* LICENSE:

\* license/LICENSE.protobuf.txt (New BSD License)
Protocol Buffers - Google's data interchange format
Copyright 2013 Google Inc. All rights reserved.
https://developers.google.com/protocol-buffers/

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.

- \* HOMEPAGE:
  - \* https://github.com/google/protobuf

------

This product optionally depends on 'Snappy', a compression library produced by Google Inc, which can be obtained at:

- \* LICENSE:
- \* license/LICENSE.snappy.txt (New BSD License) Copyright 2011, 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.

\* HOMEPAGE:

\* https://github.com/google/snappy

-----

This product optionally depends on 'JBoss Marshalling', an alternative Java serialization API, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.jboss-marshalling.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* https://github.com/jboss-remoting/jboss-marshalling

Copyright 2014, Red Hat, Inc., and individual contributors Copyright 2016 Red Hat, Inc., and individual contributors Copyright 2018 Red Hat, Inc., and individual contributors

-----

This product optionally depends on 'Apache Commons Logging', a logging framework, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.commons-logging.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* http://commons.apache.org/logging/

```
Apache Commons Logging
Copyright 2003-2014 The Apache Software Foundation
This product includes software developed at
The Apache Software Foundation (http://www.apache.org/).
This product optionally depends on 'Apache Log4J', a logging framework, which
can be obtained at:
  * LICENSE:
    * license/LICENSE.log4j.txt (Apache License 2.0)
  * HOMEPAGE:
    * http://logging.apache.org/log4j/
Apache Log4j
Copyright 1999-2017 Apache Software Foundation
This product includes software developed at
The Apache Software Foundation (http://www.apache.org/).
ResolverUtil.java
Copyright 2005-2006 Tim Fennell
Dumbster SMTP test server
Copyright 2004 Jason Paul Kitchen
TypeUtil.java
Copyright 2002-2012 Ramnivas Laddad, Juergen Hoeller, Chris Beams
picocli (http://picocli.info)
Copyright 2017 Remko Popma
This product optionally depends on 'Aalto XML', an ultra-high performance
non-blocking XML processor, which can be obtained at:
  * LICENSE:
    * license/LICENSE.aalto-xml.txt (Apache License 2.0)
  * HOMEPAGE:
    * http://wiki.fasterxml.com/AaltoHome
Copyright (c) 2006- Tatu Saloranta, tatu.saloranta@iki.fi
Copyright 2012 FasterXML.com
______
This product contains a modified version of 'HPACK', a Java implementation
of the HTTP/2 HPACK algorithm written by Twitter. It can be obtained at:
  * LICENSE:
    * license/LICENSE.hpack.txt (Apache License 2.0)
  * HOMEPAGE:
    * https://github.com/twitter/hpack
Copyright 2013 Twitter, Inc.
Copyright 2014 Twitter, Inc.
Copyright 2015 Twitter, Inc.
This product contains a modified version of 'HPACK', a Java implementation
of the HTTP/2 HPACK algorithm written by Cory Benfield.
It can be obtained at:
```

```
* LICENSE:
```

\* license/LICENSE.hyper-hpack.txt (MIT License) The MIT License (MIT)

Copyright (c) 2014 Cory Benfield

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.

#### \* HOMEPAGE:

\* https://github.com/python-hyper/hpack/

This product contains a modified version of 'HPACK', a Java implementation of the HTTP/2 HPACK algorithm written by Tatsuhiro Tsujikawa. It can be obtained at:

\* LICENSE:

\* license/LICENSE.nghttp2-hpack.txt (MIT License) The MIT License

Copyright (c) 2012, 2014, 2015, 2016 Tatsuhiro Tsujikawa Copyright (c) 2012, 2014, 2015, 2016 nghttp2 contributors

For a copy of the license, see The MIT License.

\* HOMEPAGE:

\* https://github.com/nghttp2/nghttp2/

.\_\_\_\_\_

This product contains a modified portion of 'Apache Commons Lang', a Java library provides utilities for the java.lang API, which can be obtained at:

- \* LICENSE:
  - \* license/LICENSE.commons-lang.txt (Apache License 2.0)
- \* HOMEPAGE:
  - \* https://commons.apache.org/proper/commons-lang/

Apache Commons Lang Copyright 2001-2018 The Apache Software Foundation

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

```
Prometheus Java Simpleclient 0.6.0
______
Prometheus instrumentation library for JVM applications
Copyright 2012 Andrew Wang (andrew@umbrant.com)
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.
COPYRIGHT:
Prometheus instrumentation library for JVM applications
Copyright 2014-2018 The Prometheus Authors
This product includes software developed at
Boxever Ltd. (http://www.boxever.com/).
This product includes software developed at
SoundCloud Ltd. (http://soundcloud.com/).
This product includes software developed as part of the
Ocelli project by Netflix Inc. (https://github.com/Netflix/ocelli/).
LICENSE: Apache 2.0
_____
Typesafe config
_____
Copyright (C) 2011-2015 Typesafe Inc.
Apache License, Version 2.0
______
Hystrix 1.5.18
______
hystrix-core
hystrix-codahale-metrics-publisher
Copyright 2012 Netflix, Inc.
Copyright 2013 Netflix, Inc.
Apache License, Version 2.0
______
rxjava 1.2.0
Copyright 2013 Netflix, Inc.
Copyright (c) 2016-present, RxJava Contributors.
Apache License, Version 2.0
archaius-core 0.4.1
Copyright 2012 Netflix, Inc.
Apache License, Version 2.0
______
dropwizard 3.2.2
Copyright 2010-2013 Coda Hale and Yammer, Inc., 2014-2016 Dropwizard Team
Apache License, Version 2.0
```



\_\_\_\_\_

org.slf4j.slf4j-api 1.7.0 Copyright (c) 2004-2017 QOS.ch All rights reserved. MIT License

For a copy of the license, see The MIT License.

\_\_\_\_\_

org.hdrhistogram.HdrHistogram 2.1.9

Copyright (c) 2012, 2013, 2014, 2015, 2016 Gil Tene Copyright (c) 2014 Michael Barker

Copyright (c) 2014 Matt Warren All rights reserved.

Dual license: Creative Commons 1.0, BSD 2-Clause

The code in this repository code was Written by Gil Tene, Michael Barker, and Matt Warren, and released to the public domain, as explained at http://creativecommons.org/publicdomain/zero/1.0/

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

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

Copyright (c) 2012, 2013, 2014, 2015, 2016 Gil Tene Copyright (c) 2014 Michael Barker Copyright (c) 2014 Matt Warren All rights reserved.

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

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

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

\_\_\_\_\_\_

Failsafe Version 2.3.1

\_\_\_\_\_\_

Copyright 2016,2019 the original author or authors. Apache License Version 2.0 \_\_\_\_\_\_ jackson-databind 2.10.0 \_\_\_\_\_\_ COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi LICENSE: Apache 2.0 # Jackson JSON processor 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. -----jackson-core 2.10.0 -----COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi LICENSE: Apache 2.0 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 (http://fasterxml.com). ## Credits 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. -----jackson-annotations 2.10.0 ----------jackson-datatype-jdk8 2.10.0 -----------jackson-datatype-jsr310 2.10.0 -----------jackson-module-parameter-names 2.10.0 ------COPYRIGHT: Copyright (c) 2007- Tatu Saloranta, tatu.saloranta@iki.fi LICENSE: Apache 2.0 \_\_\_\_\_ SnakeYAML 1.24 \_\_\_\_\_ Copyright (c) 2008, http://www.snakeyaml.org Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at http://www.apache.org/licenses/LICENSE-2.0 Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License. LICENSE: Apache 2.0



"You are receiving a copy of the Narayana JTA in both source and object code in the following JARs (cdi-5.9.3.Final.jar, jta-5.9.3.Final.jar, common-5.9.3.Final.jar, arjuna-5.9.3.Final.jar) The terms of the Oracle license do NOT apply to the (identify the LGPL code Narayana JTA) program; it is licensed under the following license, separately from the Oracle programs you receive.

\_\_\_\_\_\_

GNU LESSER GENERAL PUBLIC LICENSE Version 2.1, February 1999 For a copy of the license, see GNU Lesser General Public License

version 2.1.

EclipseLink 2.7.4

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.

Top Level Component Copyright:

```
* Copyright (c) 1998, 2018 Oracle and/or its affiliates.
* All rights reserved.
* This program and the accompanying materials are made available
* under the terms of the Eclipse Public License v. 2.0 which is
* available at http://www.eclipse.org/legal/epl-2.0,
* or the Eclipse Distribution License v. 1.0 which is
* available at http://www.eclipse.org/org/documents/edl-v10.php.
* SPDX-License-Identifier: EPL-2.0 OR BSD-3-Clause
```



```
// Contributors:
// Oracle - initial API and implementation from Oracle TopLink
```

\_\_\_\_\_\_

Copyright (c) 2005-2009 Terence Parr 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.

```
Copyright (c) 2000-2011 INRIA, France Telecom
// All rights reserved.
//
// Redistribution and use in source and binary forms, with or without
// modification, are permitted provided that the following conditions
// are met:
// 1. Redistributions of source code must retain the above copyright
// notice, this list of conditions and the following disclaimer.
// 2. Redistributions in binary form must reproduce the above copyright
// notice, this list of conditions and the following disclaimer in the
// documentation and/or other materials provided with the distribution.
// 3. Neither the name of the copyright holders nor the names of its
// contributors may be used to endorse or promote products derived from
// this software without specific prior written permission.
// THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
// "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
// LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
// A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
// OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
// SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
// LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
// DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
// THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,
// OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT
// OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
```



```
// SUCH DAMAGE.
Fourth- Party Dependency : commonj.sdo
Fourth- Party Dependency License:
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
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.
Eclipse Public License - v 1.0
For a copy of the license,
see Eclipse Public License - v
   1.0.
_____
Jersey 2.29.1
_____
Copyright (c) 2010,2019 Oracle and/or its affiliates.
All rights reserved.
Copyright (c) 2018 Payara Foundation and/or its affiliates.
All rights reserved.
Copyright (c) 2018,2019 Payara Foundation and/or its affiliates.
Copyright (c) 2000-2011 INRIA, France Telecom
Eclipse Public License - v 2.0
For a copy of the license,
see Eclipse Public License - v
   2.0.
Dependencies
```

- validation-api 2.0.1.Final (Apache 2.0)



- javassist-3.22.0-CR2 (Apache 2.0)

The Initial Developer of the Original Code is Shigeru Chiba. Portions created by the Initial Developer are Copyright (C) 1999- Shigeru Chiba. All Rights Reserved.

Contributor(s): Bill Burke, Jason T. Greene.

Hibernate ORM

\_\_\_\_\_

Hibernate ORM - hibernate-core (org.hibernate:hibernate-core)

Copyright (c) 2008, Red Hat Middleware LLC or third-party contributors

Copyright (c) 2010, Red Hat Middleware LLC or third-party contributors

Copyright (c) 2013, Red Hat Middleware LLC or third-party contributors

Copyright (c) 2015, Red Hat Middleware LLC or third-party contributors

GNU LESSER GENERAL PUBLIC LICENSE

For a copy of the license,

see GNU Lesser General Public License version 2.1.

\_\_\_\_\_

Fourth Party

-----

\_\_\_\_\_

"Hibernate Commons Annotations" 5.1.0.Final (org.hibernate.common:hibernate-commons-annotations) Copyright 2001-2015 Red Hat, Inc. All Rights Reserved. LGPL 2.1

-----

"AntLR Parser Generator" 2.7.7 (antlr:antlr) Copyright (c) 2012 Terence Parr and Sam Harwell The BSD License

Copyright (c) 2012 Terence Parr and 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:

- \* 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 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 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.

-----

"dom4j" 2.1.1 (org.dom4j:dom4j)

Copyright 2001- 2005 (C) MetaStuff, Ltd. All Rights Reserved. Copyright 2001-2016 (C) MetaStuff, Ltd. and DOM4J contributors. All Rights Reserved.

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 of source code must retain copyright statements and notices. Redistributions must also contain a copy of this document.
- 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 "DOM4J" must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact dom4j-info@metastuff.com.
- 4. Products derived from this Software may not be called "DOM4J" nor may "DOM4J" appear in their names without prior written permission of MetaStuff, Ltd. DOM4J is a registered trademark of MetaStuff, Ltd.
- 5. Due credit should be given to the DOM4J Project https://dom4j.github.io/

\_\_\_\_\_\_

THIS SOFTWARE IS PROVIDED BY METASTUFF, LTD. AND 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 METASTUFF, LTD. 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.

```
"Javassist" 3.24.0-GA (org.javassist:javassist)
Copyright (C) 1999- Shigeru Chiba. All Rights Reserved.
Copyright (C) 1999- Shigeru Chiba. All Rights Reserved.]]>
Copyright (C) 2004 Bill Burke. All Rights Reserved.
Apache License 2.0, Mozilla Public License 1.1,
GNU Lesser General Public License Version 2.1 or later
_____
"fastinfoset" 1.2.15 (com.sun.xml.fastinfoset:FastInfoset)
Copyright (c) 1999-2004 The Apache Software Foundation. All rights
Copyright (c) 2004-2013 Oracle and/or its affiliates. All rights reserved.
Copyright (c) 2001-2005 freebxml.org. All rights reserved.
Apache License 2.0
"JBoss Logging 3" 3.3.2.Final (org.jboss.logging:jboss-logging)
Copyright 2010,2017 Red Hat, Inc.
Copyright 2010, 2011 Red Hat, Inc., and individual contributors
Apache License 2.0
_____
```



```
"Byte Buddy (without dependencies)" 1.9.11 (net.bytebuddy:byte-buddy)
Copyright (c) 2000-2011 INRIA, France Telecom
Apache License 2.0
_____
"Java Annotation Indexer" 2.0.5.Final (org.jboss:jandex)
Copyright 2013, 2014 Red Hat, Inc., and individual contributors
Apache License 2.0
"ClassMate" 1.3.4 (com.fasterxml:classmate)
Copyright 2012-2015 fasterxml.com. All rights reserved.
Apache License 2.0
"Javassist" 3.24.0-GA (org.javassist:javassist)
Apache License 2.0, Java ClassMate library was originally written by Tatu Saloranta
(tatu.saloranta@iki.fi)
Other developers who have contributed code are:
* Brian Langel
_____
______
The following are third party dependencies used internally by the
project for documentation, web site, etc
______
_____
asciidoctorj 1.6.0-alpha.6
_____
2012-2018 Dan Allen, Ryan Waldron and the Asciidoctor Project
asciidoctor ruby gem: 1.5.6.1: (MIT)
https://github.com/asciidoctor/asciidoctor
MIT License
Copyright (C) 2012-2018 Dan Allen, Ryan Waldron and the Asciidoctor Project
For a copy of the license,
see The MIT License.
com.beust:jcommander:1.35 (Apache 2.0) https://github.com/cbeust/jcommander
Copyright 2010 Cedric Beust cedric@beust.com
Apache License, Version 2.0
org.jruby:jruby:9.1.12.0 (Ruby license, 2-clause BSDL)
https://github.com/jruby/jruby
JRuby is Copyright (c) 2007-2017 The JRuby project, and is released
under a tri EPL/GPL/LGPL license. You can use it, redistribute it
and/or modify it under the terms of the:
Eclipse Public License version 1.0
OR
GNU General Public License version 2
GNU Lesser General Public License version 2.1
bytelist (http://github.com/jruby/bytelist),
jnr-posix (https://github.com/jnr/jnr-posix),
```



```
jruby-openssl (https://github.com/jruby/jruby-openssl),
jruby-readline (https://github.com/jruby/jruby-readline),
psych (https://github.com/ruby/psych),
yydebug (http://svn.codehaus.org/jruby/trunk/jay/yydebug)
are released under the same copyright/license.
Some additional libraries distributed with JRuby are not covered by
JRuby's licence. Most of these libraries and their licenses are listed
below. Also see LICENSE.RUBY for most files found in lib/ruby/stdlib.
bench/rails/public/javascripts/* are distributed under the MIT
 license, and have the following copyrights:
 controls.js is Copyright:
 (c) 2005-2008 Thomas Fuchs (http://script.aculo.us, http://mir.aculo.us)
 (c) 2005-2007 Ivan Krstic (http://blogs.law.harvard.edu/ivan)
 (c) 2005-2007 Jon Tirsen (http://www.tirsen.com)
 dragdrop.js is Copyright:
 (c) 2005-2008 Thomas Fuchs (http://script.aculo.us, http://mir.aculo.us)
 (c) 2005-2007 Sammi Williams
    (http://www.oriontransfer.co.nz, sammi@oriontransfer.co.nz)
 effect.js is Copyright (c) 2005-2008 Thomas Fuchs.
 prototype.js is Copyright (c) 2005-2007 Sam Stephenson.
 asm (http://asm.objectweb.org) is distributed under the BSD license and is
 Copyright (c) 2000-2011 INRIA, France Telecom
 All rights reserved.
 jline2 (https://github.com/jline/jline2) is distributed under the
 BSD license:
 Copyright (c) 2002-2012, the original author or authors.
 All rights reserved.
 jzlib (http://www.jcraft.com/jzlib/) is distributed under the BSD license:
 Copyright (c) 2000-2011 ymnk, JCraft, Inc. All rights reserved.
 The "rake" library (http://rake.rubyforge.org/) is distributed under
 the MIT license, and has the following copyright:
 Copyright (c) 2003, 2004 Jim Weirich
 jcodings (http://github.com/jruby/jcodings) and
 joni (http://github.com/jruby/joni) are distributed
 under the MIT license without copyright.
 Bouncycastle is released under the MIT license:
 Copyright (c) 2000 - 2006 The Legion Of The Bouncy Castle.
 jnr-x86asm (https://github.com/jnr/jnr-x86asm) is distributed under
 the MIT license with the following copyright:
 Copyright (C) 2010 Wayne Meissner
 Copyright (c) 2008-2009, Petr Kobalicek
```



```
The following libraries are redistributed under
the Apache Software
License v2.0, available below.
 invokebinder (https://github.com/headius/invokebinder)
 jffi (https://github.com/jnr/jffi)
 jitescript (https://github.com/qmx/jitescript)
 jnr-constants (http://github.com/jnr/jnr-constants)
 jnr-enxio (https://github.com/jnr/jnr-enxio)
 jnr-ffi (https://github.com/jnr/jnr-jffi)
 jnr-netdb (http://github.com/jnr/jnr-netdb)
 jnr-unixsocket (https://github.com/jnr/jnr-unixsocket)
 joda-time (http://joda-time.sourceforge.net)
 maven (http://maven.apache.org/)
nailgun (http://martiansoftware.com/nailgun)
 options (https://github.com/headius/options)
 snakeyaml (https://github.com/asomov/snakeyaml)
 unsafe-fences (https://github.com/headius/unsafe-fences)
 racc (runtime only, https://github.com/tenderlove/racc) is
 distributed under the same license terms as the Ruby standard
 library. This includes all files under lib/ruby/stdlib/racc.
 See LICENSE.RUBY.
 json-generator and json-parser (https://github.com/flori/json)
 native extenstions under the same license terms as the
 Ruby standard library.
 See LICENSE.RUBY
The complete text of the Eclipse Public License is as follows:
 Eclipse Public License - v 1.0
 For a copy of the license,
 see Eclipse Public License - v
   1.0.
The complete text of the Common Public License is as follows:
 Common Public License - v 1.0
 For a copy of the license,
 see Common Public License - v
   1.0.
Highlight.js 9.12.0
_____
Copyright (c) 2006, Ivan Sagalaev
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 highlight.js 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 AND 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.

\_\_\_\_\_

Vuetify.js 1.0.19

\_\_\_\_\_

Copyright (c) 2016 John Jeremy Leider

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.

-----

vue@2.5.16

https://github.com/vuejs/vue
The MIT License (MIT)

Copyright (c) 2013-present, Yuxi (Evan) You

For a copy of the license, see The MIT License.

\_\_\_\_\_

material-design-icons 3.0.1

Copyright 2015 Google, Inc. All Rights Reserved. https://github.com/google/material-design-icons

Apache License, Version 2.0

-----

Roboto Font v2.138

Copyright 2015 Google Inc. All Rights Reserved. Copyright 2016 Google Inc. All Rights Reserved. Apache License, Version 2.0

Highlight.js 9.12.0

Copyright (c) 2006, Ivan Sagalaev

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 highlight.js 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 AND 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.

-----

Vuetify.js 1.0.19

\_\_\_\_\_

Copyright (c) 2016 John Jeremy Leider

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.

-----

vue@2.5.16

https://github.com/vuejs/vue
The MIT License (MIT)

Copyright (c) 2013-present, Yuxi (Evan) You

For a copy of the license, see The MIT License.



-----

material-design-icons 3.0.1

Copyright 2015 Google, Inc. All Rights Reserved. https://github.com/google/material-design-icons

Apache License, Version 2.0

-----

Roboto Font v2.138

Copyright 2015 Google Inc. All Rights Reserved. Copyright 2016 Google Inc. All Rights Reserved.

Apache License, Version 2.0

\_\_\_\_\_

lunr.js 2.3.0

Copyright (C) 2013 by Oliver Nightingale

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.

Highlight.js 9.12.0

Copyright (c) 2006, Ivan Sagalaev 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 highlight.js 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 AND 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.

Vuetify.js 1.0.19

\_\_\_\_\_

Copyright (c) 2016 John Jeremy Leider

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.

\_\_\_\_\_

vue@2.5.16

https://github.com/vuejs/vue
The MIT License (MIT)

Copyright (c) 2013-present, Yuxi (Evan) You

For a copy of the license, see The MIT License.

-----

material-design-icons 3.0.1 Copyright 2015 Google, Inc. All Rights Reserved. https://github.com/google/material-design-icons Apache License, Version 2.0

-----

Roboto Font v2.138

Copyright 2015 Google Inc. All Rights Reserved. Copyright 2016 Google Inc. All Rights Reserved. Apache License, Version 2.0

\_\_\_\_\_

lunr.js 2.3.0

\_\_\_\_\_

Copyright (C) 2013 by Oliver Nightingale

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.

\_\_\_\_\_ Vue.js 2.5.16 The MIT License (MIT) Copyright (c) 2013-present, Yuxi (Evan) You For a copy of the license, see The MIT License. Fourth Party Dependencies vue-router@3.0.1 The MIT License (MIT) Copyright (c) 2013-2016 Evan You https://github.com/vuejs/vue-router \_\_\_\_\_ vuex@3.0.1 The MIT License (MIT) Copyright (c) 2015-present Evan You https://github.com/vuejs/vuex/

## **ICU4J License Information**

ICU4J uses Open Source License

Unicode® Copyright and Terms of Use For the general privacy policy governing access to this site, see the Unicode Privacy Policy.

Unicode Copyright
Copyright © 1991-2019 Unicode, Inc. All rights reserved.
Definitions
Unicode Data Files ("DATA FILES") include all data files under the directories:
https://www.unicode.org/Public/
https://www.unicode.org/reports/
https://www.unicode.org/ivd/data/
Unicode Data Files do not include PDF online code charts under the directory:
https://www.unicode.org/Public/

Unicode Software ("SOFTWARE") includes any source code published in the Unicode Standard or any source code or compiled code under the directories: https://www.unicode.org/Public/PROGRAMS/

https://www.unicode.org/Public/PROGRAMS/ https://www.unicode.org/Public/cldr/

https://site.icu-project.org/download/

Terms of Use

Certain documents and files on this website contain a legend indicating that "Modification is permitted." Any person is hereby authorized, without fee, to modify such documents and files to create derivative works

conforming to the Unicode® Standard, subject

to Terms and Conditions herein.

Any person is hereby authorized, without fee, to view, use, reproduce, and distribute all documents and files, subject to the Terms

and Conditions herein.

Further specifications of rights and restrictions pertaining to the use of the Unicode DATA FILES and SOFTWARE can be found in the

Unicode Data Files and Software License.

Each version of the Unicode Standard has further specifications of rights and restrictions of use. For the book editions (Unicode

5.0 and earlier), these are found on the back of the title page.

The Unicode PDF online code charts carry specific restrictions. Those restrictions are incorporated as the first page of each PDF code chart.

All other files, including online documentation of the core specification for Unicode 6.0 and later, are covered under these general Terms of Use.

No license is granted to "mirror" the Unicode website where a fee is charged for access to the "mirror" site.

Modification is not permitted with respect to this document. All copies of this document must be verbatim.

#### Restricted Rights Legend

Any technical data or software which is licensed to the United States of America, its agencies and/or instrumentalities under this

Agreement is commercial technical data or commercial computer software developed exclusively at private expense as defined in FAR

2.101, or DFARS 252.227-7014 (June 1995), as applicable. For technical data, use, duplication, or disclosure by the Government is

subject to restrictions as set forth in DFARS 202.227-7015 Technical Data, Commercial and Items (Nov 1995) and this Agreement. For

Software, in accordance with FAR 12-212 or DFARS 227-7202, as applicable, use, duplication or disclosure by the Government is

subject to the restrictions set forth in this Agreement.

#### Warranties and Disclaimers

This publication and/or website may include technical or typographical errors or other inaccuracies. Changes are periodically added

to the information herein; these changes will be incorporated in new editions of the publication and/or website. Unicode, Inc. may

make improvements and/or changes in the product(s) and/or program(s) described in this publication and/or website at any time.

If this file has been purchased on magnetic or optical media from Unicode, Inc. the sole and exclusive remedy for any claim will be

exchange of the defective media within ninety (90) days of original purchase.

EXCEPT AS PROVIDED IN SECTION E.2, THIS PUBLICATION AND/OR SOFTWARE IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND EITHER

EXPRESS, IMPLIED, OR STATUTORY, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE,

OR NON-INFRINGEMENT. UNICODE, INC. AND ITS LICENSORS ASSUME NO RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THIS PUBLICATION AND/OR

SOFTWARE OR OTHER DOCUMENTS WHICH ARE REFERENCED BY OR LINKED TO THIS PUBLICATION OR THE UNICODE WEBSITE.

#### Waiver of Damages

In no event shall Unicode, Inc. or its licensors be liable for any special, incidental, indirect or consequential damages of any

kind, or any damages whatsoever, whether or not Unicode, Inc. was advised of the possibility of the damage, including, without

limitation, those resulting from the following: loss of use, data or profits, in connection with the use, modification or  $\$ 

distribution of this information or its derivatives.



Trademarks & Logos

The Unicode Word Mark and the Unicode Logo are trademarks of Unicode, Inc. "The Unicode Consortium" and "Unicode, Inc." are trade

names of Unicode, Inc. Use of the information and materials found on this website indicates your acknowledgement of Unicode, Inc.'s

exclusive worldwide rights in the Unicode Word Mark, the Unicode Logo, and the Unicode trade names.

The Unicode Consortium Name and Trademark Usage Policy ("Trademark Policy") are incorporated herein by reference and you agree to

abide by the provisions of the Trademark Policy, which may be changed from time to time in the sole discretion of Unicode, Inc.

All third party trademarks referenced herein are the property of their respective owners.

#### Miscellaneous

Jurisdiction and Venue. This website is operated from a location in the State of California, United States of America. Unicode,

Inc. makes no representation that the materials are appropriate for use in other locations. If you access this website from other

locations, you are responsible for compliance with local laws. This Agreement, all use of this website and any claims and damages

resulting from use of this website are governed solely by the laws of the State of California without regard to any principles

which would apply the laws of a different jurisdiction. The user agrees that any disputes regarding this website shall be resolved

solely in the courts located in Santa Clara County, California. The user agrees said courts have personal jurisdiction and agree to

waive any right to transfer the dispute to any other forum.

Modification by Unicode, Inc. Unicode, Inc. shall have the right to modify this Agreement at any time by posting it to this

website. The user may not assign any part of this Agreement without Unicode, Inc.'s prior written consent.

Taxes. The user agrees to pay any taxes arising from access to this website or use of the information herein, except for those based on Unicode's net income.

Severability. If any provision of this Agreement is declared invalid or unenforceable, the remaining provisions of this Agreement shall remain in effect.

Entire Agreement. This Agreement constitutes the entire agreement between the parties.

# Info-ZIP UnZip License

This is version 2009-Jan-02 of the Info-ZIP license. The definitive version of this document should be available at

ftp://ftp.info-zip.org/pub/infozip/license.html indefinitely and a copy at http://
www.info-zip.org/pub/infozip/license.html.

Copyright (c) 1990-2009 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:

Redistributions of source code (in whole or in part) must retain the above copyright notice, definition, disclaimer, and this list of conditions.

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. Additional documentation is not needed for executables where a command line license option provides these and a note regarding this option is in the executable's startup banner. 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.

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.

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.

# Infozip Zip License

This is version 2009-Jan-02 of the Info-ZIP license. The definitive version of this document should be available at

ftp://ftp.info-zip.org/pub/infozip/license.html indefinitely and a copy at http://
www.info-zip.org/pub/infozip/license.html.

Copyright (c) 1990-2009 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:

Redistributions of source code (in whole or in part) must retain the above copyright notice, definition, disclaimer, and this list of conditions.

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. Additional documentation is not needed for executables where a command line license option provides these and a note regarding this option is in the executable's startup banner. 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.

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.

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

## Insecure NMAP License, Version 7.90

\*\*\*\*\*\* Copied from LT Public License & Copyright Notices \*\*\*\*\*\*\* https://nmap.org/book/man-legal.html Text of COPYING file from the source: /\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* \* COPYING -- Describes the terms under which Nmap is distributed. \* The Nmap Security Scanner is (C) 1996-2019 Insecure.Com LLC ("The Nmap \* Project"). Nmap is also a registered trademark of the Nmap Project. \* This program is free software; you may redistribute and/or modify it \* under the terms of the GNU General Public License as published by the \* Free Software Foundation; Version 2 ("GPL"), BUT ONLY WITH ALL OF THE \* CLARIFICATIONS AND EXCEPTIONS DESCRIBED HEREIN. This quarantees your \* right to use, modify, and redistribute this software under certain \* conditions. If you wish to embed Nmap technology into proprietary \* software, we sell alternative licenses (contact sales@nmap.com). \* Dozens of software vendors already license Nmap technology such as \* host discovery, port scanning, OS detection, version detection, and

```
* the Nmap Scripting Engine.
^{\star} Note that the GPL places important restrictions on "derivative works",
* yet it does not provide a detailed definition of that term. To avoid
^{\star} misunderstandings, we interpret that term as broadly as copyright law
* allows. For example, we consider an application to constitute a
* derivative work for the purpose of this license if it does any of the
* following with any software or content covered by this license
* ("Covered Software"):
* o Integrates source code from Covered Software.
^{\star} o Reads or includes copyrighted data files, such as Nmap's nmap-os-db
* or nmap-service-probes.
^{\star} o Is designed specifically to execute Covered Software and parse the
* results (as opposed to typical shell or execution-menu apps, which will
* execute anything you tell them to).
* o Includes Covered Software in a proprietary executable installer. The *
* installers produced by InstallShield are an example of this. Including
^{\star} Nmap with other software in compressed or archival form does not
* trigger this provision, provided appropriate open source decompression
* or de-archiving software is widely available for no charge. For the
* purposes of this license, an installer is considered to include Covered *
* Software even if it actually retrieves a copy of Covered Software from
* another source during runtime (such as by downloading it from the
* Internet).
* o Links (statically or dynamically) to a library which does any of the
* o Executes a helper program, module, or script to do any of the above.
^{\star} This list is not exclusive, but is meant to clarify our interpretation
* of derived works with some common examples. Other people may interpret *
* the plain GPL differently, so we consider this a special exception to
* the GPL that we apply to Covered Software. Works which meet any of
* these conditions must conform to all of the terms of this license,
* particularly including the GPL Section 3 requirements of providing
* source code and allowing free redistribution of the work as a whole.
* As another special exception to the GPL terms, the Nmap Project grants
* permission to link the code of this program with any version of the
* OpenSSL library which is distributed under a license identical to that
* listed in the included docs/licenses/OpenSSL.txt file, and distribute
* linked combinations including the two.
* The Nmap Project has permission to redistribute Npcap, a packet
^{\star} capturing driver and library for the Microsoft Windows platform.
* Npcap is a separate work with it's own license rather than this Nmap
* license. Since the Npcap license does not permit redistribution
* without special permission, our Nmap Windows binary packages which
* contain Npcap may not be redistributed without special permission.
* Any redistribution of Covered Software, including any derived works,
^{\star} must obey and carry forward all of the terms of this license, including
^{\star} obeying all GPL rules and restrictions. For example, source code of
^{\star} the whole work must be provided and free redistribution must be
* allowed. All GPL references to "this License", are to be treated as
* including the terms and conditions of this license text as well.
```

```
* Because this license imposes special exceptions to the GPL, Covered
 * Work may not be combined (even as part of a larger work) with plain GPL *
 ^{\star} software. The terms, conditions, and exceptions of this license must
 ^{\star} be included as well. This license is incompatible with some other open ^{\star}
 * source licenses as well. In some cases we can relicense portions of
 ^{\star} Nmap or grant special permissions to use it in other open source
 * software. Please contact fyodor@nmap.org with any such requests.
 * Similarly, we don't incorporate incompatible open source software into
 * Covered Software without special permission from the copyright holders.
 * If you have any questions about the licensing restrictions on using
 * Nmap in other works, we are happy to help. As mentioned above, we also
 * offer an alternative license to integrate Nmap into proprietary
 * applications and appliances. These contracts have been sold to dozens
 * of software vendors, and generally include a perpetual license as well
 ^{\star} as providing support and updates. They also fund the continued
 * development of Nmap. Please email sales@nmap.com for further
 * information.
 * If you have received a written license agreement or contract for
 * Covered Software stating terms other than these, you may choose to use
 * and redistribute Covered Software under those terms instead of these.
 * Source is provided to this software because we believe users have a
 * right to know exactly what a program is going to do before they run it.
 * This also allows you to audit the software for security holes.
 ^{\star} Source code also allows you to port Nmap to new platforms, fix bugs,
 * and add new features. You are highly encouraged to send your changes
 * to the dev@nmap.org mailing list for possible incorporation into the
 * main distribution. By sending these changes to Fyodor or one of the
 * Insecure.Org development mailing lists, or checking them into the Nmap
 ^{\star} source code repository, it is understood (unless you specify
 * otherwise) that you are offering the Nmap Project the unlimited,
 ^{\star} non-exclusive right to reuse, modify, and relicense the code. Nmap
 * will always be available Open Source, but this is important because
 ^{\star} the inability to relicense code has caused devastating problems for
 * other Free Software projects (such as KDE and NASM). We also
 * occasionally relicense the code to third parties as discussed above.
 * If you wish to specify special license conditions of your
 * contributions, just say so when you send them.
 * 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 Nmap
 * license file for more details (it's in a COPYING file included with
 * Nmap, and also available from https://svn.nmap.org/nmap/COPYING)
GNU General Public License
Table of Contents
   * GNU GENERAL PUBLIC LICENSE
       o Preamble
       O TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION
       o How to Apply These Terms to Your New Programs
GNU GENERAL PUBLIC LICENSE
Version 2, June 1991
Copyright (C) 1989, 1991 Free Software Foundation, Inc.
59 Temple Place - Suite 330, Boston, MA 02111-1307, USA
Everyone is permitted to copy and distribute verbatim copies
```

of this license document, but changing it is not allowed. Preamble

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

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

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

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

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

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

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

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

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.

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 an 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 2 of the License, or (at your option) any later version. This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA. Also add information on how to contact you by electronic and paper mail. If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) 19yy name of author Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome



```
to redistribute it under certain conditions; type `show c'
for details.
The hypothetical commands `show w' and `show c' should show the appropriate
parts of the General Public License. Of course, the commands you use may be
called something other than `show w' and `show c'; they could even be
mouse-clicks or menu items--whatever suits your program.
You should also get your employer (if you work as a programmer) or your
school, if any, to sign a "copyright disclaimer" for the program, if
necessary. Here is a sample; alter the names:
Yoyodyne, Inc., hereby disclaims all copyright
interest in the program `Gnomovision'
(which makes passes at compilers) written
by James Hacker.
signature of Ty Coon, 1 April 1989
Ty Coon, President of Vice
This General Public License does not permit incorporating your program into
proprietary programs. If your program is a subroutine library, you may
consider it more useful to permit linking proprietary applications with the
library. If this is what you want to do, use the GNU Library General Public
License instead of this License.
% Files: nsock/src/*
 * The nsock parallel socket event library is (C) 1999-2019 Insecure.Com
 * LLC This library is free software; you may redistribute and/or
 * modify it under the terms of the GNU General Public License as
 * published by the Free Software Foundation; Version 2. This guarantees
 * your right to use, modify, and redistribute this software under certain *
 * conditions. If this license is unacceptable to you, Insecure.Com LLC
 * may be willing to sell alternative licenses (contact
 * sales@insecure.com ).
 * As a special exception to the GPL terms, Insecure.Com LLC grants
 * permission to link the code of this program with any version of the
 * OpenSSL library which is distributed under a license identical to that
 * listed in the included docs/licenses/OpenSSL.txt file, and distribute
 ^{\star} linked combinations including the two. You must obey the GNU GPL in all ^{\star}
 * respects for all of the code used other than OpenSSL. If you modify
 ^{\star} this file, you may extend this exception to your version of the file,
 * but you are not obligated to do so.
 * If you received these files with a written license agreement stating
 * terms other than the (GPL) terms above, then that alternative license
 * agreement takes precedence over this comment.
 * Source is provided to this software because we believe users have a
 ^{\star} right to know exactly what a program is going to do before they run it.
 * This also allows you to audit the software for security holes.
 * Source code also allows you to port Nmap to new platforms, fix bugs,
 * and add new features. You are highly encouraged to send your changes
 * to the dev@nmap.org mailing list for possible incorporation into the
 * main distribution. By sending these changes to Fyodor or one of the
 * Insecure.Org development mailing lists, or checking them into the Nmap
 * source code repository, it is understood (unless you specify otherwise)
 * that you are offering the Nmap Project (Insecure.Com LLC) the
 * unlimited, non-exclusive right to reuse, modify, and relicense the
 ^{\star} code. Nmap will always be available Open Source, but this is important ^{\star}
 * because the inability to relicense code has caused devastating problems *
 * for other Free Software projects (such as KDE and NASM). We also
 * occasionally relicense the code to third parties as discussed above.
 * If you wish to specify special license conditions of your
```

```
* contributions, just say so when you send them.
^{\star} This program is distributed in the hope that it will be useful, but
^{\star} WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU
* General Public License v2.0 for more details
 * (http://www.gnu.org/licenses/gpl-2.0.html).
% Files: liblua/lua.h
/*****************************
* Copyright (C) 1994-2018 Lua.org, PUC-Rio.
^{\star} 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
^{\star} 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.
*************************
% Files: nse zlib.cc
/****************************
* Author : Tiago Dionizio
^{\star} Library : lzlib - Lua 5 interface to access zlib library functions ^{\star}
* 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:
^{\star} 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.
*****************************
% Files: nbase/getopt.h
^{\star} \, my getopt.h - interface to my re-implementation of getopt.
* Copyright 1997, 2000, 2001, 2002, 2006, Benjamin Sittler
* 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.
*/
% Files: libdnet-stripped/include/queue.h
* Copyright (c) 1991, 1993
     The Regents of the University of California. All rights reserved.
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
 * are met:
* 1. Redistributions of source code must retain the above copyright
     notice, this list of conditions and the following disclaimer.
 * 2. Redistributions in binary form must reproduce the above copyright
     notice, this list of conditions and the following disclaimer in the
     documentation and/or other materials provided with the distribution.
 * 3. 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.
 ^{\star} 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.
     @(#)queue.h
                    8.5 (Berkeley) 8/20/94
% Files: nbase/snprintf.c
* Copyright (c) 1995-1999 Kungliga Tekniska Högskolan
* (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:
 ^{\star} 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.
* /
% Files: nbase/nbase misc.c
/*
* CRC32 Cyclic Redundancy Check
* From: http://www.ietf.org/rfc/rfc1952.txt
* Copyright (c) 1996 L. Peter Deutsch
* Permission is granted to copy and distribute this document for any
^{\star} purpose and without charge, including translations into other
* languages and incorporation into compilations, provided that the
^{\star} copyright notice and this notice are preserved, and that any
^{\star} substantive changes or deletions from the original are clearly
* marked.
*/
```

# JPython 1.1.x Software License

- 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 using JPython version 1.1.x in source or binary form and its associated documentation as provided herein ("Software").
- 2. Subject to the terms and conditions of this License Agreement, CNRI hereby grants Licensee a non-exclusive, non-transferable, 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 CNRI's License Agreement and CNRI's notice of copyright, i.e., "Copyright 1996-1999 Corporation for National Research Initiatives; All Rights Reserved" are both retained in the Software, alone or in any derivative version prepared by Licensee.

Alternatively, in lieu of CNRI's License Agreement, Licensee may substitute the following text (omitting the quotes), provided, however, that such text is displayed prominently in the Software alone or in any derivative version prepared by Licensee: "JPython (Version 1.1.x) is made available subject to the terms and conditions in CNRI's License Agreement. This Agreement may be located on the Internet using the following unique, persistent identifier (known as a handle): 1895.22/1006. The License may also be obtained from a proxy server on the Web using the following URL: http://hdl.handle.net/1895.22/1006."

- 3. In the event Licensee prepares a derivative work that is based on or incorporates the Software or any part thereof, and wants to make the derivative work available to the public as provided herein, then Licensee hereby agrees to indicate in any such work, in a prominently visible way, the nature of the modifications made to CNRI's Software.
- 4. Licensee may not use CNRI trademarks or trade name, including JPython or CNRI, in a trademark sense to endorse or promote products or services of Licensee, or any third party. Licensee may use the mark JPython in connection with Licensee's derivative versions that are based on or incorporate the Software, but only in the form "JPython-based", " or equivalent.
- 5. CNRI is making the Software 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 THE SOFTWARE WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
- 6. CNRI SHALL NOT BE LIABLE TO LICENSEE OR 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. SOME STATES DO NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY SO THE ABOVE DISCLAIMER MAY NOT APPLY TO LICENSEE.
- 7. This License Agreement may be terminated by CNRI (i) immediately upon written notice from CNRI of any material breach by the Licensee, if the nature of the breach is such that it cannot be promptly remedied; or (ii) sixty (60) days following notice from CNRI to Licensee of a material remediable breach, if Licensee has not remedied such breach within that sixty-day period.
- 8. This License Agreement shall be governed by and interpreted in all respects by the law of the State of Virginia, excluding conflict of law provisions. Nothing in this Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between CNRI and Licensee.
- 9. By clicking on the "ACCEPT" button where indicated, or by installing, copying or otherwise using the Software, Licensee agrees to be bound by the terms and conditions of this License Agreement.

[ACCEPT BUTTON]

JPython was created in late 1997 by Jim Hugunin. Jim was also the primary developer while he was at CNRI. In February 1999 Barry Warsaw took over as primary developer and released JPython version 1.1.



In October 2000 Barry helped move the software to SourceForge where it was renamed to Jython. Jython 2.0 and 2.1 were developed under the Jython specific license below.

From the 2.2 release on, Jython contributors have signed Python Software Foundation contributor agreements and releases are covered under the Python Software Foundation license version 2.

The standard library is covered by the Python Software Foundation license as well. See the Lib/LICENSE file for details.

The zxJDBC package was written by Brian Zimmer and originally licensed under the GNU Public License. The package is now covered by the Jython Software License.

The command line interpreter is covered by the Apache Software License. See the org/apache/LICENSE file for details.

Fourth Party Licenses

A. Legion of the Bouncy Castle Inc.

Please note this should be read in the same way as the MIT license.

Please also note this licensing model is made possible through funding from donations and the sale of support contracts.

For a copy of the license, see The Legion of the Bouncy
Castle.

B. Guava

Guava uses Apache Software License 2.0

For a copy of the license, see Apache Software Foundation Licenses, Version 2.0.

C. ICU4J

For a copy of the License, see ICU4J License Information.

D. JFFI (Java Foreign Function Interface)

JFFI uses Apache 2.0 license

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.

Alternatively, you can redistribute it and/or modify it under

the terms of the GNU Lesser General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This code is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

See the GNU Lesser General Public License version 3 for more details.

You should have received a copy of the GNU Lesser General Public License version 3 along with this work. If not, see https://www.gnu.org/licenses/gpl-3.0.html.

### E. Netty

netty/netty is licensed under the Apache License 2.0 A permissive license whose main conditions require preservation of copyright and license notices. Contributors provide an express grant of patent rights. Licensed works, modifications, and larger works may be distributed under different terms and without source code.

#### F. ASM

ASM: a very small and fast Java bytecode manipulation framework Copyright (c) 2000-2011 INRIA, France Telecom All rights reserved.

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

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

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

### G. JNR

jnr-posix is released under a tri EPL/GPL/LGPL license. You can use it, redistribute it and/or modify it under the terms of the:

Eclipse Public License version 2.0
OR
GNU General Public License version 2
OR
GNU Lesser General Public License version 2.1

For a copy of the Eclipse Public License version 2.0,

```
see Eclipse Public License - v
   2.0.
For a copy of the GNU General Public License version 2,
see GNU General Public License - v
  2.0.
For a copy of the GNU Lesser General Public License version 2.1,
see GNU Lesser General Public License
   version 2.1.
H. Postgressql
Copyright (c) 1997, PostgreSQL Global Development Group
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
```

I. Xerces

POSSIBILITY OF SUCH DAMAGE.

Xerces uses the Apache Software License, Version 2.0 (which is already included for Guava).

```
Antlr
 * [The "BSD license"]
 * Copyright (c) 2012 Terence Parr
 * Copyright (c) 2012 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.
Commons-compress
Apache Commons Compress
Copyright 2002-2019 The Apache Software Foundation
This product includes software developed at
The Apache Software Foundation (https://www.apache.org/).
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:
"LZMA SDK is placed in the public domain." (http://www.7-zip.org/sdk.html)
/*
^{\star} Licensed to the Apache Software Foundation (ASF) under one
 ^{\star} 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
 ^{\star} Unless required by applicable law or agreed to in writing,
 ^{\star} 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.
 */
For a copy of the license,
see Apache Software Foundation Licenses, Version
   2.0.
Jar-constants
Apache License Version 2.0, January 2004 added above
failure-access
* Copyright (C) 2018 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
 * 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.
Jnr-ffi & jar-netdb
* Copyright (C) 2010 Wayne Meissner
* This file is part of the JNR project.
* 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.
Guava
/*
* Copyright (C) 2009 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
* http://www.apache.org/licenses/LICENSE-2.0
^{\star} 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.
*/
Java-sizeof
Apache License Version 2.0, January 2004 added above
Jline
/*
\star Copyright (c) 2002-2016, the original author or authors.
^{\star} This software is distributable under the BSD license. See the terms of the
* BSD license in the documentation provided with this software.
* http://www.opensource.org/licenses/bsd-license.php
Note: This license has also been called the "Simplified BSD License"
and the "FreeBSD License".
See also the 3-clause BSD License.
Copyright (c) 2002-2016, the original author or authors.
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.

Jar-netdb

Copyright (C) 2010 Wayne Meissner

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.

# Jython 2.0, 2.1 License

Copyright (c) 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007 Jython 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 the Jython Developers 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.

## Mozilla Public License Version 2.0

## 1. Definitions

-----

## 1.1. "Contributor"

means each individual or legal entity that creates, contributes to the creation of, or owns Covered Software.

#### 1.2. "Contributor Version"

means the combination of the Contributions of others (if any) used by a Contributor and that particular Contributor's Contribution.

#### 1.3. "Contribution"

means Covered Software of a particular Contributor.

#### 1.4. "Covered Software"

means Source Code Form to which the initial Contributor has attached the notice in Exhibit A, the Executable Form of such Source Code Form, and Modifications of such Source Code Form, in each case including portions thereof.

### 1.5. "Incompatible With Secondary Licenses" means

- (a) that the initial Contributor has attached the notice described in Exhibit B to the Covered Software; or
- (b) that the Covered Software was made available under the terms of version 1.1 or earlier of the License, but not also under the terms of a Secondary License.

## 1.6. "Executable Form"

means any form of the work other than Source Code Form.

## 1.7. "Larger Work"

means a work that combines Covered Software with other material, in a separate file or files, that is not Covered Software.

## 1.8. "License"

means this document.

## 1.9. "Licensable"

means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently, any and all of the rights conveyed by this License.

## 1.10. "Modifications"

means any of the following:

- (a) any file in Source Code Form that results from an addition to, deletion from, or modification of the contents of Covered Software; or
- (b) any new file in Source Code Form that contains any Covered Software.

#### 1.11. "Patent Claims" of a Contributor

means any patent claim(s), including without limitation, method, process, and apparatus claims, in any patent Licensable by such Contributor that would be infringed, but for the grant of the License, by the making, using, selling, offering for sale, having made, import, or transfer of either its Contributions or its Contributor Version.

## 1.12. "Secondary License"

means either the GNU General Public License, Version 2.0, the GNU Lesser General Public License, Version 2.1, the GNU Affero General Public License, Version 3.0, or any later versions of those licenses.

#### 1.13. "Source Code Form"

means the form of the work preferred for making modifications.

#### 1.14. "You" (or "Your")

means an individual or a legal entity exercising rights under this License. For legal entities, "You" includes any entity that controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

### 2. License Grants and Conditions

\_\_\_\_\_

### 2.1. Grants

Each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

- (a) under intellectual property rights (other than patent or trademark) Licensable by such Contributor to use, reproduce, make available, modify, display, perform, distribute, and otherwise exploit its Contributions, either on an unmodified basis, with Modifications, or as part of a Larger Work; and
- (b) under Patent Claims of such Contributor to make, use, sell, offer for sale, have made, import, and otherwise transfer either its Contributions or its Contributor Version.

### 2.2. Effective Date

The licenses granted in Section 2.1 with respect to any Contribution become effective for each Contribution on the date the Contributor first distributes such Contribution.

## 2.3. Limitations on Grant Scope

The licenses granted in this Section 2 are the only rights granted under this License. No additional rights or licenses will be implied from the distribution or licensing of Covered Software under this License. Notwithstanding Section 2.1(b) above, no patent license is granted by a Contributor:

(a) for any code that a Contributor has removed from Covered Software;or

- (b) for infringements caused by: (i) Your and any other third party's modifications of Covered Software, or (ii) the combination of its Contributions with other software (except as part of its Contributor Version); or
- (c) under Patent Claims infringed by Covered Software in the absence of its Contributions.

This License does not grant any rights in the trademarks, service marks, or logos of any Contributor (except as may be necessary to comply with the notice requirements in Section 3.4).

## 2.4. Subsequent Licenses

No Contributor makes additional grants as a result of Your choice to distribute the Covered Software under a subsequent version of this License (see Section 10.2) or under the terms of a Secondary License (if permitted under the terms of Section 3.3).

#### 2.5. Representation

Each Contributor represents that the Contributor believes its Contributions are its original creation(s) or it has sufficient rights to grant the rights to its Contributions conveyed by this License.

#### 2.6. Fair Use

This License is not intended to limit any rights You have under applicable copyright doctrines of fair use, fair dealing, or other equivalents.

## 2.7. Conditions

Sections 3.1, 3.2, 3.3, and 3.4 are conditions of the licenses granted in Section 2.1.

## 3. Responsibilities

\_\_\_\_\_

## 3.1. Distribution of Source Form

All distribution of Covered Software in Source Code Form, including any Modifications that You create or to which You contribute, must be under the terms of this License. You must inform recipients that the Source Code Form of the Covered Software is governed by the terms of this License, and how they can obtain a copy of this License. You may not attempt to alter or restrict the recipients' rights in the Source Code Form.

### 3.2. Distribution of Executable Form

If You distribute Covered Software in Executable Form then:

- (a) such Covered Software must also be made available in Source Code Form, as described in Section 3.1, and You must inform recipients of the Executable Form how they can obtain a copy of such Source Code Form by reasonable means in a timely manner, at a charge no more than the cost of distribution to the recipient; and
- (b) You may distribute such Executable Form under the terms of this License, or sublicense it under different terms, provided that the



license for the Executable Form does not attempt to limit or alter the recipients' rights in the Source Code Form under this License.

## 3.3. Distribution of a Larger Work

You may create and distribute a Larger Work under terms of Your choice, provided that You also comply with the requirements of this License for the Covered Software. If the Larger Work is a combination of Covered Software with a work governed by one or more Secondary Licenses, and the Covered Software is not Incompatible With Secondary Licenses, this License permits You to additionally distribute such Covered Software under the terms of such Secondary License(s), so that the recipient of the Larger Work may, at their option, further distribute the Covered Software under the terms of either this License or such Secondary License(s).

#### 3.4. Notices

You may not remove or alter the substance of any license notices (including copyright notices, patent notices, disclaimers of warranty, or limitations of liability) contained within the Source Code Form of the Covered Software, except that You may alter any license notices to the extent required to remedy known factual inaccuracies.

## 3.5. Application of Additional Terms

You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, You may do so only on Your own behalf, and not on behalf of any Contributor. You must make it absolutely clear that any such warranty, support, indemnity, or liability obligation is offered by You alone, and You hereby agree to indemnify every Contributor for any liability incurred by such Contributor as a result of warranty, support, indemnity or liability terms You offer. You may include additional disclaimers of warranty and limitations of liability specific to any jurisdiction.

## 4. Inability to Comply Due to Statute or Regulation

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Software due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be placed in a text file included with all distributions of the Covered Software under this License. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

## 5. Termination

5.1. The rights granted under this License will terminate automatically if You fail to comply with any of its terms. However, if You become compliant, then the rights granted under this License from a particular Contributor are reinstated (a) provisionally, unless and until such Contributor explicitly and finally terminates Your grants, and (b) on an ongoing basis, if such Contributor fails to notify You of the non-compliance by some reasonable means prior to 60 days after You have come back into compliance. Moreover, Your grants from a particular Contributor are reinstated on an ongoing basis if such Contributor



notifies You of the non-compliance by some reasonable means, this is the first time You have received notice of non-compliance with this License from such Contributor, and You become compliant prior to 30 days after Your receipt of the notice.

5.2. If You initiate litigation against any entity by asserting a patent infringement claim (excluding declaratory judgment actions, counter-claims, and cross-claims) alleging that a Contributor Version directly or indirectly infringes any patent, then the rights granted to You by any and all Contributors for the Covered Software under Section 2.1 of this License shall terminate.

5.3. In the event of termination under Sections 5.1 or 5.2 above, all end user license agreements (excluding distributors and resellers) which have been validly granted by You or Your distributors under this License prior to termination shall survive termination.

## \* 6. Disclaimer of Warranty

\_\_\_\_\_

\* Covered Software is provided under this License on an "as is"

\* basis, without warranty of any kind, either expressed, implied, or

\* statutory, including, without limitation, warranties that the

\* Covered Software is free of defects, merchantable, fit for a

\* particular purpose or non-infringing. The entire risk as to the

\* quality and performance of the Covered Software is with You.

\* Should any Covered Software prove defective in any respect, You

\* (not any Contributor) assume the cost of any necessary servicing,

\* repair, or correction. This disclaimer of warranty constitutes an

\* essential part of this License. No use of any Covered Software is

\* authorized under this License except under this disclaimer.

## 7. Limitation of Liability

-----

\* Under no circumstances and under no legal theory, whether tort

(including negligence), contract, or otherwise, shall any

Contributor, or anyone who distributes Covered Software as

\* permitted above, be liable to You for any direct, indirect,

\* special, incidental, or consequential damages of any character

including, without limitation, damages for lost profits, loss of

goodwill, work stoppage, computer failure or malfunction, or any

and all other commercial damages or losses, even if such party

\* shall have been informed of the possibility of such damages. This

limitation of liability shall not apply to liability for death or

personal injury resulting from such party's negligence to the

extent applicable law prohibits such limitation. Some

jurisdictions do not allow the exclusion or limitation of

incidental or consequential damages, so this exclusion and

limitation may not apply to You.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

8. Litigation

-----

Any litigation relating to this License may be brought only in the courts of a jurisdiction where the defendant maintains its principal place of business and such litigation shall be governed by laws of that jurisdiction, without reference to its conflict-of-law provisions. Nothing in this Section shall prevent a party's ability to bring cross-claims or counter-claims.

#### 9. Miscellaneous

\_\_\_\_\_

This License represents the complete agreement concerning the subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not be used to construe this License against a Contributor.

#### 10. Versions of the License

\_\_\_\_\_

#### 10.1. New Versions

Mozilla Foundation is the license steward. Except as provided in Section 10.3, no one other than the license steward has the right to modify or publish new versions of this License. Each version will be given a distinguishing version number.

## 10.2. Effect of New Versions

You may distribute the Covered Software under the terms of the version of the License under which You originally received the Covered Software, or under the terms of any subsequent version published by the license steward.

### 10.3. Modified Versions

If you create software not governed by this License, and you want to create a new license for such software, you may create and use a modified version of this License if you rename the license and remove any references to the name of the license steward (except to note that such modified license differs from this License).

10.4. Distributing Source Code Form that is Incompatible With Secondary Licenses

If You choose to distribute Source Code Form that is Incompatible With Secondary Licenses under the terms of this version of the License, the notice described in Exhibit B of this License must be attached.

## Exhibit A - Source Code Form License Notice

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

# **OpenSSL License**

```
^{\star} Copyright (c) 1998-2019 The OpenSSL Project. All rights reserved.
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
^{\star} 1. Redistributions of source code must retain the above copyright
    notice, this list of conditions and the following disclaimer.
^{\star} 2. Redistributions in binary form must reproduce the above copyright
    notice, this list of conditions and the following disclaimer in
    the documentation and/or other materials provided with the
    distribution.
* 3. All advertising materials mentioning features or use of this
     software must display the following acknowledgment:
     "This product includes software developed by the OpenSSL Project
    for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
* 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to
    endorse or promote products derived from this software without
    prior written permission. For written permission, please contact
    openssl-core@openssl.org.
* 5. Products derived from this software may not be called "OpenSSL"
    nor may "OpenSSL" appear in their names without prior written
    permission of the OpenSSL Project.
* 6. Redistributions of any form whatsoever must retain the following
    acknowledgment:
    "This product includes software developed by the OpenSSL Project
    for use in the OpenSSL Toolkit (http://www.openssl.org/)"
* THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY
* EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR
* PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR
* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT
* NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;
* LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT,
* STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE)
* ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED
* OF THE POSSIBILITY OF SUCH DAMAGE.
* This product includes cryptographic software written by Eric Young
* (eay@cryptsoft.com). This product includes software written by Tim
```

\* Hudson (tjh@cryptsoft.com).

# **Original SSLeay License**

```
* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)
* All rights reserved.
\mbox{\ensuremath{^{\star}}} This package is an SSL implementation written
* by Eric Young (eay@cryptsoft.com).
^{\star} The implementation was written so as to conform with Netscapes SSL.
* This library is free for commercial and non-commercial use as long as
* the following conditions are aheared to. The following conditions
* apply to all code found in this distribution, be it the RC4, RSA,
* lhash, DES, etc., code; not just the SSL code. The SSL documentation
* included with this distribution is covered by the same copyright terms
* except that the holder is Tim Hudson (tjh@cryptsoft.com).
* Copyright remains Eric Young's, and as such any Copyright notices in
* the code are not to be removed.
^{\star} If this package is used in a product, Eric Young should be given attribution
* as the author of the parts of the library used.
* This can be in the form of a textual message at program startup or
* in documentation (online or textual) provided with the package.
* Redistribution and use in source and binary forms, with or without
* modification, are permitted provided that the following conditions
* are met:
* 1. Redistributions of source code must retain the copyright
    notice, this list of conditions and the following disclaimer.
* 2. Redistributions in binary form must reproduce the above copyright
    notice, this list of conditions and the following disclaimer in the
    documentation and/or other materials provided with the distribution.
* 3. All advertising materials mentioning features or use of this software
    must display the following acknowledgement:
     "This product includes cryptographic software written by
     Eric Young (eay@cryptsoft.com)"
    The word 'cryptographic' can be left out if the rouines from the library
    being used are not cryptographic related :-).
* 4. If you include any Windows specific code (or a derivative thereof) from
     the apps directory (application code) you must include an acknowledgement:
     "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"
* THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND
* ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
* IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
* ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
* FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
* DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
* OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
* HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
* LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
* OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
* SUCH DAMAGE.
* The licence and distribution terms for any publically available version or
* derivative of this code cannot be changed. i.e. this code cannot simply be
* copied and put under another distribution licence
* [including the GNU Public Licence.]
```



# 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 MERCHANTIBILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The End

# The Jython License

A. TERMS AND CONDITIONS FOR ACCESSING OR OTHERWISE USING JYTHON

\_\_\_\_\_

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 ("Jython") 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 Jython alone or in any derivative version, provided, however, that PSF's License Agreement and PSF's notice of copyright, i.e., "Copyright (c) 2007 Python Software Foundation; All Rights Reserved" are retained in Jython alone or in any derivative version prepared by Licensee.
- 3. In the event Licensee prepares a derivative work that is based on or incorporates Jython 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 Jython.
- 4. PSF is making Jython 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 JYTHON WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
- 5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF JYTHON FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING JYTHON, 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 Jython, Licensee agrees to be bound by the terms and conditions of this License Agreement.

# The Legion of the Bouncy Castle

Copyright (c) 2000 - 2019 The Legion of the Bouncy Castle Inc. (https://www.bouncycastle.org)

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

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

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

## The 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.



## The Perl License 5.32.0

Wherever there is an election between the Artistic License and the GNU General Public License, Oracle elects to use the code under the Artistic License.

```
## Files:
perl-5.32.0/inline.h
     inline.h
      Copyright (C) 2012 by Larry Wall and others
Copyright (c) 2008-2009 Bjoern Hoehrmann
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
      This file contains tables and code adapted from
      https://bjoern.hoehrmann.de/utf-8/decoder/dfa/, which requires this
      copyright notice:
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.
 * This file is a home for static inline functions that cannot go in other
 * header files, because they depend on proto.h (included after most other
 * headers) or struct definitions.
 ^{\star} Each section names the header file that the functions "belong" to.
 * /
## Files:
perl-5.32.0/time64.c
Copyright (c) 2007-2008 Michael G Schwern
This software originally derived from Paul Sheer's pivotal gmtime r.c.
The 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.
* /
## Files:
perl-5.32.0/perl.h
/* The tables below are adapted from
* https://bjoern.hoehrmann.de/utf-8/decoder/dfa/, which requires this copyright
* notice:
Copyright (c) 2008-2009 Bjoern Hoehrmann
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.
*/
## Files:
perl-5.32.0/ebcdic tables.h
/* This file contains definitions for various tables used in EBCDIC handling.
* More info is in utfebcdic.h
 * Some of the tables are adapted from
        https://bjoern.hoehrmann.de/utf-8/decoder/dfa/
 * which requires this copyright notice:
Copyright (c) 2008-2009 Bjoern Hoehrmann
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.
*/
## Files:
perl-5.32.0/ext/File-Glob/bsd glob.h
* Copyright (c) 1989, 1993
      The Regents of the University of California. All rights reserved.
 * This code is derived from software contributed to Berkeley by
 * Guido van Rossum.
 * Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * 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.
 ^{\star} 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.
     @(#)alob.h
                   8.1 (Berkeley) 6/2/93
     [lots of perl-specific changes since then--see bsd glob.c]
*/
## Files:
perl-5.32.0/ext/File-Glob/bsd glob.c
* Copyright (c) 1989, 1993
     The Regents of the University of California. All rights reserved.
* This code is derived from software contributed to Berkeley by
* Guido van Rossum.
* 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.
*/
## Files:
perl-5.32.0/cpan/Sys-Syslog/fallback/syslog.h
* Copyright (c) 1982, 1986, 1988, 1993
     The Regents of the University of California. All rights reserved.
```

```
* Redistribution and use in source and binary forms, with or without
 * modification, are permitted provided that the following conditions
 * are met:
 * 1. Redistributions of source code must retain the above copyright
     notice, this list of conditions and the following disclaimer.
 ^{\star} 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.
 * 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.
     @(#)syslog.h 8.1 (Berkeley) 6/2/93
 */
## Files:
perl-5.32.0/vms/vms.c
/*
* @(#)argproc.c 2.2 94/08/16 Mark Pizzolato (mark AT infocomm DOT com)
 *****************
 * Copyright (C) 1989-1994, 2007 by
 * Mark Pizzolato - INFO COMM, Danville, California (510) 837-5600
 ^{\star} \, Permission is hereby granted for the reproduction of this software
 ^{\star} on condition that this copyright notice is included in source
 * distributions of the software. The code may be modified and
 * distributed under the same terms as Perl itself.
 * 27-Aug-1994 Modified for inclusion in perl5
             by Charles Bailey (bailey AT newman DOT upenn DOT edu)
 * /
## Files:
perl-5.32.0/taint.c
     taint.c
     Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
     2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
*/
## Files:
per1-5.32.0/mathoms.c
     mathoms.c
     Copyright (C) 2005, 2006, 2007, 2008, 2009, 2010,
     2011, 2012 by Larry Wall and others
```

```
You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
* /
## Files:
perl-5.32.0/symbian/PerlApp.cpp
/* The PerlApp application is licensed under the same terms as Perl itself.
* Note that this PerlApp is for Symbian/Series 60/80/UIQ smartphones
 * and it has nothing whatsoever to do with the ActiveState PerlApp. */
## Files:
perl-5.32.0/dist/Devel-PPPort/module2.c
perl-5.32.0/dist/Devel-PPPort/module3.c
/*************************
* Perl/Pollution/Portability
*****************
* Version 3.x, Copyright (C) 2004-2013, Marcus Holland-Moritz.
* Version 2.x, Copyright (C) 2001, Paul Marquess.
* Version 1.x, Copyright (C) 1999, Kenneth Albanowski.
* This program is free software; you can redistribute it and/or
* modify it under the same terms as Perl itself.
******************************
## Files:
perl-5.32.0/utfebcdic.h
     utfebcdic.h
     Copyright (C) 2001, 2002, 2003, 2005, 2006, 2007, 2009,
     2010, 2011 by Larry Wall, Nick Ing-Simmons, and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/cop.h
    cop.h
     Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
     2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * Control ops (cops) are one of the two ops OP NEXTSTATE and OP DBSTATE,
 * that (loosely speaking) are statement separators.
 * They hold information important for lexical state and error reporting.
 * At run time, PL curcop is set to point to the most recently executed cop,
 * and thus can be used to determine our current state.
*/
## Files:
perl-5.32.0/opnames.h
/* -*- buffer-read-only: t -*-
     opnames.h
     Copyright (C) 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007,
```

```
2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE !!!!!!!
 * This file is built by regen/opcode.pl from its data.
 * Any changes made here will be lost!
## Files:
perl-5.32.0/perlio.c
 * perlio.c
 * Copyright (c) 1996-2006, Nick Ing-Simmons
 * Copyright (c) 2006, 2007, 2008, 2009, 2010, 2011 Larry Wall and others
 * You may distribute under the terms of either the GNU General Public License
 * or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/op.c
      op.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/symbian/symbian stubs.h
      symbian stubs.h
      Copyright (c) Nokia 2004-2005. All rights reserved.
       This code is licensed under the same terms as Perl itself.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/compress.c
/* compress.c -- compress a memory buffer
* Copyright (C) 1995-2005, 2014, 2016 Jean-loup Gailly, Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
* /
## Files:
perl-5.32.0/proto.h
/* -*- buffer-read-only: t -*-
      proto.h
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE
                                   1111111
 * This file is built by regen/embed.pl from data in embed.fnc,
 * regen/embed.pl, regen/opcodes, intrpvar.h and perlvars.h.
 * Any changes made here will be lost!
```

```
* Edit those files and run 'make regen headers' to effect changes.
 */
## Files:
perl-5.32.0/invlist inline.h
     invlist_inline.h
      Copyright (C) 2012 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/infback.c
/* infback.c -- inflate using a call-back interface
* Copyright (C) 1995-2016 Mark Adler
 ^{\star} For conditions of distribution and use, see copyright notice in zlib.h
* /
## Files:
per1-5.32.0/pp hot.c
      pp hot.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/perl.h
      perl.h
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001
      2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/win32/fcrypt.c
/* Copyright (C) 1993 Eric Young - see README for more details */
## Files:
perl-5.32.0/handy.h
     handy.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1999, 2000,
      2001, 2002, 2004, 2005, 2006, 2007, 2008, 2012 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/gv.h
     gv.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
```

```
* /
## Files:
perl-5.32.0/symbian/symbian proto.h
     symbian proto.h
     Copyright (c) Nokia 2004-2005. All rights reserved.
       This code is licensed under the same terms as Perl itself.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/crctable.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/bzlib.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/blocksort.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/compress.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/randtable.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/huffman.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/bzlib.h
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/decompress.c
perl-5.32.0/cpan/Compress-Raw-Bzip2/bzip2-src/bzlib private.h
  This file is part of bzip2/libbzip2, a program and library for
  lossless, block-sorting data compression.
  bzip2/libbzip2 version 1.0.8 of 13 July 2019
   Copyright (C) 1996-2019 Julian Seward
  Please read the WARNING, DISCLAIMER and PATENTS sections in the
  README file.
  This program is released under the terms of the license contained
   in the file LICENSE.
   ----- */
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/deflate.c
/* deflate.c -- compress data using the deflation algorithm
 * Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
* /
## Files:
perl-5.32.0/inline.h
/* This is the inlined portion of utf8n to uvchr msgs. It handles the
 * simple cases, and, if necessary calls a helper function to deal with the
* more complex ones. Almost all well-formed non-problematic code points
 * are considered simple, so that it's unlikely that the helper function
 * will need to be called.
 * This is an adaptation of the tables and algorithm given in
 * https://bjoern.hoehrmann.de/utf-8/decoder/dfa/, which provides
 * comprehensive documentation of the original version. A copyright notice
 * for the original version is given at the beginning of this file. The
 * Perl adapation is documented at the definition of PL strict utf8 dfa tab[].
## Files:
per1-5.32.0/op.h
     op.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 */
```

```
## Files:
perl-5.32.0/NetWare/Nwpipe.c
perl-5.32.0/NetWare/CLIBstuf.c
perl-5.32.0/NetWare/nwperlsys.h
perl-5.32.0/NetWare/nwstdio.h
perl-5.32.0/NetWare/NWTInfo.c
perl-5.32.0/NetWare/nwhashcls.cpp
perl-5.32.0/NetWare/perllib.cpp
perl-5.32.0/NetWare/interface.h
perl-5.32.0/NetWare/Main.c
per1-5.32.0/NetWare/nw5thread.c
perl-5.32.0/NetWare/nw5iop.h
perl-5.32.0/NetWare/CLIBstr.h
perl-5.32.0/NetWare/nwutil.h
perl-5.32.0/NetWare/nwplglob.c
perl-5.32.0/NetWare/nw5sck.h
perl-5.32.0/NetWare/interface.cpp
perl-5.32.0/NetWare/interface.c
perl-5.32.0/NetWare/CLIBsdio.h
perl-5.32.0/NetWare/intdef.h
perl-5.32.0/NetWare/nwpipe.h
perl-5.32.0/NetWare/CLIBstuf.h
perl-5.32.0/NetWare/nwperlhost.h
perl-5.32.0/NetWare/nwperlsys.c
perl-5.32.0/NetWare/nwtinfo.h
perl-5.32.0/NetWare/nwvmem.h
perl-5.32.0/NetWare/nwplglob.h
perl-5.32.0/NetWare/Nwmain.c
perl-5.32.0/NetWare/nw5sck.c
perl-5.32.0/NetWare/win32ish.h
perl-5.32.0/NetWare/NWUtil.c
perl-5.32.0/NetWare/iperlhost.h
perl-5.32.0/NetWare/deb.h
perl-5.32.0/NetWare/netware.h
perl-5.32.0/NetWare/nw5.c
perl-5.32.0/NetWare/nwhashcls.h
perl-5.32.0/NetWare/nw5thread.h
 ^{\star} Copyright © 2001 Novell, Inc. All Rights Reserved.
 * You may distribute under the terms of either the GNU General Public
 * License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/patchlevel.h
     patchlevel.h
      Copyright (C) 1993, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
      2003, 2004, 2005, 2006, 2007, 2008, 2009, by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/mg.c
     mq.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
```

```
You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/cpan/Digest-SHA/src/sha.c
* sha.c: routines to compute SHA-1/224/256/384/512 digests
 * Ref: NIST FIPS PUB 180-4 Secure Hash Standard
 * Copyright (C) 2003-2018 Mark Shelor, All Rights Reserved
 * Version: 6.02
 * Fri Apr 20 16:25:30 MST 2018
*/
## Files:
per1-5.32.0/mg.h
     mq.h
     Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1999,
     2000, 2002, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
* /
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/zconf.h
/* zconf.h -- configuration of the zlib compression library
* Copyright (C) 1995-2016 Jean-loup Gailly, Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
*/
## Files:
perl-5.32.0/cpan/Digest-SHA/src/sha64bit.h
* sha64bit.h: placeholder values for 64-bit data and routines
 * Ref: NIST FIPS PUB 180-4 Secure Hash Standard
 * Copyright (C) 2003-2018 Mark Shelor, All Rights Reserved
 * Version: 6.02
 * Fri Apr 20 16:25:30 MST 2018
 ^{\star} The following macros supply placeholder values that enable the
 * sha.c module to successfully compile when 64-bit integer types
 * aren't present.
 * They are appropriately redefined in sha64bit.c if the compiler
 * provides a 64-bit type (i.e. when SHA 384 512 is defined).
 */
## Files:
perl-5.32.0/pp_sort.c
     pp sort.c
     Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
```

```
License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/adler32.c
/* adler32.c -- compute the Adler-32 checksum of a data stream
* Copyright (C) 1995-2011, 2016 Mark Adler
* For conditions of distribution and use, see copyright notice in zlib.h
## Files:
perl-5.32.0/embedvar.h
/* -*- buffer-read-only: t -*-
     embedvar.h
     Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
     2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE
                                    !!!!!!!!
 * This file is built by regen/embed.pl from data in embed.fnc,
 * regen/embed.pl, regen/opcodes, intrpvar.h and perlvars.h.
 * Any changes made here will be lost!
 ^{\star} Edit those files and run 'make regen_headers' to effect changes.
* /
## Files:
per1-5.32.0/pad.c
     pad.c
     Copyright (C) 2002, 2003, 2004, 2005, 2006, 2007, 2008
     by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/vms/vmsish.h
     vmsish.h
     VMS-specific C header file for perl5.
     Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
     2002, 2003, 2004, 2005, 2006, 2007 by Charles Bailey and others.
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
     Please see Changes*.* or the Perl Repository Browser for revision history.
*/
## Files:
perl-5.32.0/parser.h
     parser.h
     Copyright (c) 2006, 2007, 2009, 2010, 2011 Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * This file defines the layout of the parser object used by the parser
```

```
* and lexer (perly.c, toke.c).
*/
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/zlib.h
/* zlib.h -- interface of the 'zlib' general purpose compression library
 version 1.2.11, January 15th, 2017
 Copyright (C) 1995-2017 Jean-loup Gailly and Mark Adler
 This software is provided 'as-is', without any express or implied
 warranty. In no event will the authors be held liable for any damages
 arising from the use of this software.
 Permission is granted to anyone to use this software for any purpose,
 including commercial applications, and to alter it and redistribute it
  freely, subject to the following restrictions:
 1. The origin of this software must not be misrepresented; you must not
    claim that you wrote the original software. If you use this software
    in a product, an acknowledgment in the product documentation would be
    appreciated but is not required.
 2. Altered source versions must be plainly marked as such, and must not be
    misrepresented as being the original software.
 3. This notice may not be removed or altered from any source distribution.
 Jean-loup Gailly
                        Mark Adler
 iloup@azip.ora
                         madler@alumni.caltech.edu
 The data format used by the zlib library is described by RFCs (Request for
 Comments) 1950 to 1952 in the files http://tools.ietf.org/html/rfc1950
  (zlib format), rfc1951 (deflate format) and rfc1952 (gzip format).
## Files:
perl-5.32.0/win32/perlhost.h
/* perlhost.h
* (c) 1999 Microsoft Corporation. All rights reserved.
* Portions (c) 1999 ActiveState Tool Corp, http://www.ActiveState.com/
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
* /
## Files:
perl-5.32.0/utf8.h
   utf8.h
* This file contains definitions for use with the UTF-8 encoding. It
* actually also works with the variant UTF-8 encoding called UTF-EBCDIC, and
* hides almost all of the differences between these from the caller. In other
* words, someone should #include this file, and if the code is being compiled
* on an EBCDIC platform, things should mostly just work.
     Copyright (C) 2000, 2001, 2002, 2005, 2006, 2007, 2009,
     2010, 2011 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
*/
## Files:
perl-5.32.0/regexp.h
     regexp.h
     Copyright (C) 1993, 1994, 1996, 1997, 1999, 2000, 2001, 2003,
     2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
```

```
* /
## Files:
perl-5.32.0/hints/linux.sh
# record the version, formats:
# icc (ICC) 10.1 20080801
# icpc (ICC) 10.1 20080801
# followed by a copyright on the second line
## Files:
perl-5.32.0/symbian/PerlApp.h
/* The PerlApp application is licensed under the same terms as Perl itself. */
## Files:
per1-5.32.0/regcomp.c
 ^{\star} pregcomp and pregexec -- regsub and regerror are not used in perl
      Copyright (c) 1986 by University of Toronto.
     Written by Henry Spencer. Not derived from licensed software.
     Permission is granted to anyone to use this software for any
     purpose on any computer system, and to redistribute it freely,
      subject to the following restrictions:
      1. The author is not responsible for the consequences of use of
          this software, no matter how awful, even if they arise
          from defects in it.
      2. The origin of this software must not be misrepresented, either
          by explicit claim or by omission.
      3. Altered versions must be plainly marked as such, and must not
          be misrepresented as being the original software.
         Alterations to Henry's code are...
 ****
 ****
         Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999,
 ***
         2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008
         by Larry Wall and others
 ****
 ****
         You may distribute under the terms of either the GNU General Public
 ****
         License or the Artistic License, as specified in the README file.
 * Beware that some of this code is subtly aware of the way operator
 * precedence is structured in regular expressions. Serious changes in
 * regular-expression syntax might require a total rethink.
 * /
## Files:
perl-5.32.0/vms/vms.c
/*
** Copyright 1996 by Charles Bailey
** Permission is given to distribute this code as part of the Perl
** standard distribution under the terms of the GNU General Public
** License or the Perl Artistic License. Copies of each may be
** found in the Perl standard distribution.
*/
## Files:
perl-5.32.0/perlio.h
     perlio.h
     Copyright (C) 1996, 1997, 1999, 2000, 2001, 2002, 2003,
```

```
2004, 2005, 2006, 2007, by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/perlapi.h
/* -*- buffer-read-only: t -*-
      perlapi.h
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE !!!!!!!
 * This file is built by regen/embed.pl from data in embed.fnc,
 * regen/embed.pl, regen/opcodes, intrpvar.h and perlvars.h.
 * Any changes made here will be lost!
 ^{\star} Edit those files and run 'make regen_headers' to effect changes.
 * /
## Files:
perl-5.32.0/sv.h
     sv.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
*/
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/uncompr.c
/* uncompr.c -- decompress a memory buffer
* Copyright (C) 1995-2003, 2010, 2014, 2016 Jean-loup Gailly, Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
*/
## Files:
perl-5.32.0/perlsdio.h
     perlsdio.h
      Copyright (C) 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/embed.h
/* -*- buffer-read-only: t -*-
      embed.h
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
```

```
You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE !!!!!!!
 * This file is built by regen/embed.pl from data in embed.fnc,
 * regen/embed.pl, regen/opcodes, intrpvar.h and perlvars.h.
 * Any changes made here will be lost!
 * Edit those files and run 'make regen headers' to effect changes.
## Files:
perl-5.32.0/symbian/PerlBase.cpp
perl-5.32.0/symbian/PerlBase.h
^{\prime\star} The CPerlBase class is licensed under the same terms as Perl itself. ^{\star\prime}
## Files:
perl-5.32.0/fakesdio.h
     fakesdio.h
      Copyright (C) 2000, by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/win32/vmem.h
/* vmem.h
 * (c) 1999 Microsoft Corporation. All rights reserved.
 * Portions (c) 1999 ActiveState Tool Corp, http://www.ActiveState.com/
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * Options:
 * Defining USE MSVCRT MEM ALLOC will cause all memory allocations
 * to be forwarded to the compiler's MSVCR*.DLL. Defining USE LINKED LIST as
 ^{\star} well will track all allocations in a doubly linked list, so that the host can
 * free all memory allocated when it goes away.
 * If USE MSVCRT MEM ALLOC is not defined then Knuth's boundary tag algorithm
 * is used; defining USE BUDDY BLOCKS will use Knuth's algorithm R
 * (Buddy system reservation)
* /
## Files:
per1-5.32.0/deb.c
     deb.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
*/
## Files:
perl-5.32.0/universal.c
     universal.c
      Copyright (C) 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004,
      2005, 2006, 2007, 2008 by Larry Wall and others
```

```
You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/regcharclass.h
/* -*- buffer-read-only: t -*-
     regcharclass.h
      Copyright (C) 2007, 2011 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE
                                   !!!!!!!
 * This file is built by regen/regcharclass.pl.
 * Any changes made here will be lost!
 * WARNING: These macros are for internal Perl core use only, and may be
 * changed or removed without notice.
 * /
## Files:
perl-5.32.0/pp.h
/*
     pp.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/reentr.c
/* -*- buffer-read-only: t -*-
      reentr.c
      Copyright (C) 2002, 2003, 2005, 2006, 2007 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE !!!!!!!
 * This file is built by regen/reentr.pl from data in regen/reentr.pl.
 * Any changes made here will be lost!
 * /
## Files:
perl-5.32.0/util.h
     util.h
      Copyright (C) 1991, 1992, 1993, 1999, 2001, 2002, 2003, 2004, 2005,
      2007, by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/av.c
    av.c
```

```
Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/utf8.c
      utf8.c
      Copyright (C) 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008
      by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/symbian/PerlUi.cpp
perl-5.32.0/symbian/PerlUi.h
/* The PerlUi class is licensed under the same terms as Perl itself. */
## Files:
perl-5.32.0/intrpvar.h
/* intrpvar.h
      Copyright (C) 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005,
      2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/crc32.c
/* crc32.c -- compute the CRC-32 of a data stream
* Copyright (C) 1995-2006, 2010, 2011, 2012, 2016 Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
 * Thanks to Rodney Brown for his contribution of faster
 * CRC methods: exclusive-oring 32 bits of data at a time, and pre-computing
 * tables for updating the shift register in one step with three exclusive-ors
 * instead of four steps with four exclusive-ors. This results in about a
 * factor of two increase in speed on a Power PC G4 (PPC7455) using gcc -O3.
 * /
## Files:
perl-5.32.0/vms/vms.c
     vms.c
      VMS-specific routines for perl5
      Copyright (C) 1993-2015 by Charles Bailey and others.
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
## Files:
perl-5.32.0/symbian/PerlUtil.h
perl-5.32.0/symbian/PerlUtil.cpp
^{\prime\prime} The PerlUtil class is licensed under the same terms as Perl itself. ^{\star\prime}
## Files:
```

```
perl-5.32.0/dist/IO/poll.c
 * poll.c
 * Copyright (c) 1997-8 Graham Barr . All rights reserved.
 * This program is free software; you can redistribute it and/or
 * modify it under the same terms as Perl itself.
 * For systems that do not have the poll() system call (for example Linux
 * kernels < v2.1.23) try to emulate it as closely as possible using select()
 */
## Files:
per1-5.32.0/malloc.c
* malloc.c (Caltech) 2/21/82
 * Chris Kingsley, kingsley@cit-20.
* This is a very fast storage allocator. It allocates blocks of a small
 * number of different sizes, and keeps free lists of each size. Blocks that
 * don't exactly fit are passed up to the next larger size. In this
 * implementation, the available sizes are 2^n-4 (or 2^n-12) bytes long.
 * If PACK MALLOC is defined, small blocks are 2^n bytes long.
 * This is designed for use in a program that uses vast quantities of memory,
 * but bombs when it runs out.
 * Modifications Copyright Ilya Zakharevich 1996-99.
 * Still very quick, but much more thrifty. (Std config is 10% slower
 * than it was, and takes 67% of old heap size for typical usage.)
 * Allocations of small blocks are now table-driven to many different
 * buckets. Sizes of really big buckets are increased to accommodate
 * common size=power-of-2 blocks. Running-out-of-memory is made into
 * an exception. Deeply configurable and thread-safe.
 * /
## Files:
perl-5.32.0/unixish.h
     unixish.h
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1999, 2000, 2001, 2002,
      2003, 2006, 2007, by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/inffast.h
/* inffast.h -- header to use inffast.c
* Copyright (C) 1995-2003, 2010 Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
*/
## Files:
perl-5.32.0/reentr.h
/* -*- buffer-read-only: t -*-
      reentr.h
      Copyright (C) 2002, 2003, 2005, 2006, 2007 by Larry Wall and others
```

```
You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * !!!!!!! DO NOT EDIT THIS FILE !!!!!!!
 * This file is built by regen/reentr.pl from data in regen/reentr.pl.
 * Any changes made here will be lost!
## Files:
per1-5.32.0/op.c
/* The very first range is marked as adjacent to the
 * non-existent range below it, as it causes things to "just
 * work" (TradeMark)
* If the lowest code point in this chunk is M, it adjoins the
* J-L range */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/trees.c
/* trees.c -- output deflated data using Huffman coding
* Copyright (C) 1995-2017 Jean-loup Gailly
 * detect data type() function provided freely by Cosmin Truta, 2006
 * For conditions of distribution and use, see copyright notice in zlib.h
* /
## Files:
per1-5.32.0/toke.c
     toke.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/dump.c
     dump.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
     You may distribute under the terms of either the GNU General Public
     License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/regexec.c
 * pregcomp and pregexec -- regsub and regerror are not used in perl
      Copyright (c) 1986 by University of Toronto.
      Written by Henry Spencer. Not derived from licensed software.
     Permission is granted to anyone to use this software for any
     purpose on any computer system, and to redistribute it freely,
      subject to the following restrictions:
      1. The author is not responsible for the consequences of use of
         this software, no matter how awful, even if they arise
          from defects in it.
      2. The origin of this software must not be misrepresented, either
          by explicit claim or by omission.
```

```
3. Altered versions must be plainly marked as such, and must not
          be misrepresented as being the original software.
 ****
         Alterations to Henry's code are...
 ****
         Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999,
 ****
         2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008
 ****
         by Larry Wall and others
 ****
 ****
         You may distribute under the terms of either the GNU General Public
 ****
         License or the Artistic License, as specified in the README file.
 ^{\star} Beware that some of this code is subtly aware of the way operator
 * precedence is structured in regular expressions. Serious changes in
 * regular-expression syntax might require a total rethink.
*/
## Files:
perl-5.32.0/doio.c
      doio.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/regcomp.h
      regcomp.h
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999,
      2000, 2001, 2002, 2003, 2005, 2006, 2007, by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/inflate.h
/* inflate.h -- internal inflate state definition
* Copyright (C) 1995-2016 Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
* /
## Files:
perl-5.32.0/symbian/PerlApp.cpp
perl-5.32.0/symbian/PerlApp.h
perl-5.32.0/symbian/PerlBase.cpp
perl-5.32.0/symbian/PerlBase.h
perl-5.32.0/symbian/PerlUtil.h
perl-5.32.0/symbian/PerlUtil.cpp
perl-5.32.0/symbian/PerlRecog.cpp
/* Copyright (c) 2004-2005 Nokia. All rights reserved. */
## Files:
perl-5.32.0/miniperlmain.c
     miniperlmain.c or perlmain.c - a generated file
      Copyright (C) 1994, 1995, 1996, 1997, 1999, 2000, 2001, 2002, 2003,
      2004, 2005, 2006, 2007, 2016 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
```

```
License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/symbian/PerlRecog.cpp
^{\prime \star} The PerlRecog application is licensed under the same terms as Perl itself. ^{\star \prime}
## Files:
per1-5.32.0/hv.c
     hv.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
per1-5.32.0/pad.h
      pad.h
      Copyright (C) 2002, 2003, 2005, 2006, 2007, 2008,
      2009, 2010, 2011 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 ^{\star} This file defines the types and macros associated with the API for
 * manipulating scratchpads, which are used by perl to store lexical
 * variables, op targets and constants.
 */
## Files:
per1-5.32.0/XSUB.h
      XSUB.h
      Copyright (C) 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
      2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/inffast.c
/* inffast.c -- fast decoding
* Copyright (C) 1995-2017 Mark Adler
 ^{\star} For conditions of distribution and use, see copyright notice in zlib.h
 * /
## Files:
perl-5.32.0/thread.h
      thread.h
      Copyright (C) 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006,
      by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/perly.h
/* Bison interface for Yacc-like parsers in C
```

```
Copyright (C) 1984, 1989-1990, 2000-2015, 2018-2019 Free Software Foundation,
   Inc.
   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 3 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, see . */
## Files:
per1-5.32.0/gv.c
      gv.c
      Copyright (C) 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000,
      2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/pp_sys.c
      pp sys.c
      Copyright (C) 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003,
      2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/numeric.c
     numeric.c
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 * /
## Files:
perl-5.32.0/symbian/PerlUi.cpp
perl-5.32.0/symbian/PerlUi.h
/* Copyright (c) 2005 Nokia. All rights reserved. */
## Files:
perl-5.32.0/perly.c
     perly.c
      Copyright (c) 2004, 2005, 2006, 2007, 2008,
      2009, 2010, 2011 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
      Note that this file was originally generated as an output from
      GNU bison version 1.875, but now the code is statically maintained
      and edited; the bits that are dependent on perly.y are now
```

```
#included from the files perly.tab and perly.act.
      Here is an important copyright statement from the original, generated
      file:
      As a special exception, when this file is copied by Bison into a
      Bison output file, you may use that output file without
      restriction. This special exception was added by the Free
      Software Foundation in version 1.24 of Bison.
 */
## Files:
per1-5.32.0/util.c
     util.c
      Copyright (C) 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001,
      2002, 2003, 2004, 2005, 2006, 2007, 2008 by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/INTERN.h
     INTERN.h
      Copyright (C) 1991, 1992, 1993, 1995, 1996, 1998, 2000, 2001,
      by Larry Wall and others
      You may distribute under the terms of either the GNU General Public
      License or the Artistic License, as specified in the README file.
 */
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/inftrees.h
/* inftrees.h -- header to use inftrees.c
 * Copyright (C) 1995-2005, 2010 Mark Adler
 * For conditions of distribution and use, see copyright notice in zlib.h
*/
## Files:
perl-5.32.0/cpan/Compress-Raw-Zlib/zlib-src/deflate.h
/* deflate.h -- internal compression state
 * Copyright (C) 1995-2016 Jean-loup Gailly
 * For conditions of distribution and use, see copyright notice in zlib.h
 * /
## Files:
perl-5.32.0/inline.h
=for apidoc isUTF8 CHAR
Evaluates to non-zero if the first few bytes of the string starting at C
```

## **Additional Licensing Information**

For additional licensing information about other third party products included with Oracle Database, which is distributed with Enterprise Manager, go to Oracle Database documentation, select the Oracle Database release version, and access the Oracle Database bookshelf by clicking **Browse**. The *Oracle Database Licensing Information User Manual* for the selected release is available on the Books page.

For additional licensing information about other third party products included with JDK 7, which is distributed with Enterprise Manager, go to: https://www.oracle.com/downloads/licenses/terms-thirdpartyreadme-java-license.html

This documentation is in prerelease status and is intended for demonstration and preliminary use only. It may not be specific to the hardware on which you are using the software. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to this documentation and will not be responsible for any loss, costs, or damages incurred due to the use of this documentation.



## Index

A	C
Active Session History (ASH), 2-2	Cache data management, 3-31, 5-6
Adapter metrics, 3-23	Centralized management console, 3-23, 3-33
Add Protected Database for ZDLRA, 10-3	Change Approval Framework, 7-23
ADDM Spotlight, 2-2	Change Center, 3-8
Administration, 7-43	Change history, 3-35
Administrative flows, 4-2	Change Management Dashboard, 7-23
Advanced alert management, 3-27, 3-33	Chargeback, 10-7
Advisor Central, 10-3	Chargeback and Metering, 4-2
Agent Management, 10-1	Cloning, 7-23
Agent Provisioning and Patching, 10-1	cluster visibility, 3-5
Agent-based Target Discovery, 10-1	Coherence Management, 3-4
Alerts and Metric Threshold Management, 10-1	Complete cluster visibility, 3-31
Application Management Suite for JD Edwards	Complete service monitoring, 8-6
EnterpriseOne, 7-33	Complete user experience monitoring, 8-2
Application Management Suite for PeopleSoft	Compliance, <i>2-13</i> , <i>2-36</i> , <i>3-6</i> , <i>6-2</i>
Enterprise, 7-42	Compliance management, 2-9, 2-11
Application Management Suite for Siebel, 7-1	Compliance management of Exadata Engineered
Application/Suite/Service modeling, 8-2	Systems, 2-11
ASH analytics, 2-2	Component top wait event analysis, 2-3
Auto Discovery, 10-1	Composite Application Management, 3-3, 5-4
Automate deployment, 3-5, 3-31, 5-6	Concurrent Processing Dashboard, 7-23
Automatic Database Diagnostic Monitor (ADDM),	Configuration, 5-2
2-2	Configuration Collection Extensibility, 2-13, 2-36,
Automatic discovery, 3-35, 7-2, 7-13, 7-23, 7-34,	3-6, 6-2, 6-10
7-43	Configuration Compare, 2-13, 2-36, 3-6, 6-2, 6-10
Automatic SQL Tuning, 2-7	Configuration comparison, 3-35
Automatic Workload Repository (AWR), 2-2	Configuration drift management, 2-13
AWR Hub, 2-3	Configuration History, 2-13, 2-36, 3-6, 6-2, 6-10
AWR Warehouse, 2-2	Configuration Instance Browser, 2-13, 2-36, 3-6,
AWR Warehouse Diagnosability, 2-2	6-2, 6-10
	Configuration management, 2-9, 2-11, 3-5, 3-23,
D	3-27, 3-31, 3-33, 6-17, 7-2, 7-13, 7-23,
В	7-34, 7-43, 10-7
Backup and recovery, 7-13	Configuration Management Pack for Applications,
Beacons, 5-2, 8-6	6-1
Blackouts, 2-2, 3-3, 3-23, 3-27, 3-31, 3-35, 5-2,	Configuration Save, 2-13, 2-36, 3-6, 6-2, 6-10
5-4, 5-6, 6-10, 6-12, 6-17, 7-2, 7-13, 7-23,	Configuration Search, 2-13, 2-36, 3-6, 6-2, 6-10
7-34	Configuration snapshot, 3-35
Bottleneck detection, 2-3	Configuration Topology, 2-13, 2-36, 3-6, 6-2, 6-10
Business Application Management, 3-3, 3-27, 5-3,	Configure Database Fleet Backup to Recovery
5-4	Appliance, 2-34
Business Intelligence Management Pack, 3-34	Consolidation Planner, 10-7
Dadiness intelligence management rack, 5 54	CONTROL MANAGEMENT PACK ACCESS
	initialization parameter, 2-3



Copy Objects, 2-11, 2-44 Customization Discovery and Reporting, 7-23 Customization Manager, 7-23 Customized Reports and Dashboard, 8-2	Enterprise Messaging, 3-1 Error management, 10-3 Event Compression, 2-3, 3-3, 3-24, 3-31, 3-35, 5-2, 5-4, 5-6, 5-7, 6-10, 6-17, 7-2, 7-13, 7-34, 10-2
D	Event log analysis, 7-2
Dashboard reports, 3-35 Data movement, 10-3 database and engineered systems management, 2-1 Database Fleet Advanced Backup Configuration for Recovery Appliance Using EMCLI, 2-34 Database Impact Advisor, 2-31 Database Lifecycle Management Pack for Oracle Database, 2-8 database management patching, 2-11, 2-47 provisioning, 2-11, 2-47 upgrade, 2-47	Exadata Cell Grid Administration, 2-2 Cell Grid Performance, 2-2 Cell Group Health, 2-2 Database Machine Configuration, 2-36 Grid, 10-5 Exadata Cloud Advanced Monitoring, 2-31 Exadata Engineered System Compliance with AHF EXAchk, 2-9 Exadata Fleet Dashboards, 2-31 Exadata Infrastructure Patching, 2-31 Exadata Management Pack, 2-31 Exadata Resource Utilization, 2-2 Exalogic Elastic Cloud Management, 3-3 Exascale Advanced Monitoring, 2-31
Database Migration Workbench, 10-3 DBSAT Compliance Standards, 2-9	Execute SQL REST API, 10-3  Extensibility Development Kit (EDK), 10-2
Default Settings, 1-2 Deployment automation, 3-23	F
deployment models, 4-2 Diagnostic Snapshot, 3-4, 5-5 Differential heap analysis, 3-3, 5-5 Disaster Recovery via Site Guard, 2-11, 3-6, 6-2, 10-7 Discovery and service modeling, 3-23 Dynamic metric baselines and Adaptive metric thresholds, 2-3	File Synchronization, 2-11, 2-36, 6-2 Fleet Maintenance, 2-9 Fleet Maintenance Hub, 2-9 Fleet Patching & Provisioning, 2-14 Fleet Provisioning and Patching, 2-9  G
Dynamic Runbooks, 2-3, 3-3, 3-23, 3-31, 3-35, 5-2, 5-4, 5-6, 5-7, 6-10, 6-17, 7-2, 7-13, 7-34, 10-1  Dynamic Topology, 10-7	Governance, 4-2 Grid Infrastructure management, 10-3 Groups and Systems Management, 10-2
End-to-end transaction tracing, 3-23	Guest VM/Linux OS Patching, 10-7  H
Engineered System Autonomous Health Framework (AHF) Administration, 2-31 Enriched Data Exchange, 8-2 Enterprise Data Governance, 2-11 Enterprise Manager restricted-use license, 1-3 Enterprise Manager App for Grafana, 10-1 Enterprise Manager Cloud Control Service Level Management, 8-5 Enterprise Manager Dashboards, 10-1	High availability, 10-3 Historical analysis and reporting, 3-23, 3-27, 3-33 Historical metrics, 3-35 Historical performance monitoring, 3-3 Historical Trending, 10-7 Host monitoring and management, 10-7 Hybrid Cloud Management, 2-11
Enterprise Manager Federation, 10-1 Enterprise Manager Mobile, 10-2 Enterprise Manager Self Management and Monitoring, 10-2 Enterprise Manager Support Workbench, 10-2	I/O Resource Management Advisor, 2-31 IB Network, 10-6 ILOM, KVM, Cisco Switch, PDU, 10-6 In-Memory Advisor, 2-7



Information Publisher and Reporting, 10-2 Infrastructure management, 3-23, 3-27, 3-33 Infrastructure Management, 10-7 Interactive JVM transaction trace, 3-3, 5-5  J Java Diagnostics, 7-13 Java Flight Recorder, 3-1 Java Mission Control, 3-1 Job Diagnostics Dashboards, 10-2 Job System and Corrective Actions, 10-2 JVM Diagnostics Agent hot deployment, 3-3, 5-3 JVM pool monitoring, 3-4, 5-3  K	Memory leak detection and analysis, 6-10 Metering and chargeback, 3-8 Metric alert management, 6-17 Metric and Alert/Event History, 2-3, 3-3, 3-23, 3-27, 3-31, 3-33, 3-35, 5-2, 5-4, 5-6, 6-10, 6-12, 7-2, 7-13, 7-23, 7-34  Metric Extensions, 2-3, 3-3, 3-23, 3-28, 3-31, 3-33, 3-35, 5-2, 5-4, 5-6, 6-10, 6-12, 6-17, 7-2, 7-13, 7-23, 7-34, 10-7  Monitor multiple clusters, 3-5, 3-31  Monitoring, 7-13, 7-23  Monitoring and diagnostics, 5-2, 7-2, 7-23, 7-34, 7-43  Monitoring and Incident Management, 10-2 Monitoring Profiles for V12N, 10-7 Monitoring Templates, 2-3, 3-3, 3-23, 3-27, 3-31,
KPI tracking and reporting, 8-2	3-33, 3-35, 5-2, 5-4, 5-6, 6-10, 6-12, 6-17, 7-2, 7-13, 7-23, 7-34
	Multi-OMS deployment for high availability, 10-3 My Oracle Support integration, 10-2
Legacy Management Packs	N
Change Management Pack for Oracle Database, 2-43 Configuration Management Pack for Oracle Database, 2-35 Provisioning and Patch Automation Pack for	Non-structured data management, 10-3 Notifications, 2-2, 2-11, 3-4, 3-6, 3-24, 3-27, 3-31, 3-33, 3-35, 5-2, 5-4, 5-6, 6-10, 6-12, 6-17, 7-2, 7-14, 7-24, 7-34, 10-7
Oracle Database, 2-46 license authorization requirement, 1-1	O
Load Plan and Session Monitoring, 3-33 Log analysis, 7-13 Log Configuration, 3-8 Log file monitoring, 3-31, 5-6 Log Viewer, 3-4, 5-5	Object, program and initialization parameters management, 10-4 OCI Bridge, 10-3 Optimizer Management, 10-4 Oracle Cloud Management Pack for Oracle
M	Database, 4-1 Oracle Data Masking and Subsetting Pack, 2-27
Machine Administration, 3-8  Manage JDBC Data Sources, 3-8  Management Connectors, 2-3, 3-3, 3-23, 3-31, 3-35, 5-2, 5-4, 5-6, 5-7, 6-10, 6-17, 7-2, 7-13, 7-34, 10-7  Management Pack for Non-Oracle Middleware, 6-8  Management Pack for Oracle Coherence, 3-30  Management Pack for Oracle Data Integrator, 3-32  Management Pack for WebCenter, 3-36	Oracle Enterprise Manager for MySQL, 6-18 Oracle HTTP Server, 7-2 Oracle Linux Virtualization (OLV), 10-2 Oracle Real User Experience Insight, 8-1 Oracle Tuning Pack, 2-6 Oracle VM and Guest VM provisioning, 10-7 Oracle VM management, 10-7 Out-of-box Self Service Portal, 4-2
Management Pack for WebCenter, 3-26 management pack information displaying in Enterprise Manager, 1-2 Management Pack Plus for Identity Management, 5-1 management packs enable and disable, 1-1 Memory access mode, 2-3	Parallel OMS Upgrades, 10-2 Patch Manager, 7-24 Patch Recommendations, 2-47, 3-7 Patching, 3-6 Patching Planning, 2-47 Performance and event reports, 6-17 Performance charts, 3-36 Performance Hub, 2-2



performance monitoring, 6-11, 10-7	Service level management, 3-24, 3-27, 3-33, 7-2,
and trending, 6-17	7-14, 7-24, 7-34, 7-43
Performance monitoring, 3-33	Service modeling, 5-3, 8-6
and diagnostics, 2-2	Service tests and beacons, 3-36
PL/SQL Monitoring, 2-7	Service-level objectives, 3-4
Pluggable Database (PDB) Create/Plug/Unplug,	Session Replay, 8-2
10-4	Single-step discovery, 5-3
Problem Flow Analysis, 7-14	Site Guard, 2-11, 3-6, 6-2
Process Control, 10-5	Snap Clone, 4-2
Provisioning Deployment Procedures, 3-6	SOA Management Pack EE, 3-22
Provisioning Procedures, 2-47	SOA Management Pack Enterprise Edition
	SOA targets, 3-22
D	Software Library, 10-3
R	Space and Undo Management, 10-4
RAC	SQL Access Advisor, 2-7
Scale Back, 2-11	SQL Execution, 10-4
Scale Out, 2-11 Scale Out, 2-11	SQL Profiles, 2-7
	SQL Tuning Advisor, 2-7
RAC Scale Out and Scale Back, 2-47	Storage Plug-in, 10-7
Real Time ADDM, 2-2	Support Workbench, 7-14, 10-4, 10-5
Real user monitoring, 7-2, 7-24, 7-34, 7-43	Synchronization of WebLogic Server
Real-time configuration change detection, <i>2-36</i> ,	Configuration Files, 3-7
3-7, 6-2	System MBean Browser, 3-8
Real-time Database Operations Monitoring, 2-7	
Real-time monitoring of JVM, 6-11	System Monitoring Plug-ins for Non-Oracle
Real-time schema change detection, 2-13, 2-44	Databases, 6-16
Real-time SQL Monitoring, 2-7	System Monitoring Plug-ins for Non-Oracle
Record configuration actions, 3-8	Middleware, 6-11
Recovery Appliance Protected Database Fleet	
Archival Backup Management, 2-34	T
Reorganize objects, 2-7	
Replay Compare Period Report, 2-2	Template Collections, 2-3, 3-3, 3-24, 3-27, 3-31,
Request performance, 3-4	3-33, 3-35, 5-2, 5-4, 5-6, 6-10, 7-2, 7-13,
Resource Management, 10-4	7-24, 7-34
Restricted-use License, 1-3	TestMaster Snapshots, 4-2
Routing Topology, 3-7, 5-4, 5-6	third-party licensing, A-1
RUEI, 8-1	Top Activity Lite, 2-2
Run-time governance, 3-24, 3-28	Topology view, 3-32, 5-7
	Topology Viewer, 7-14, 10-5, 10-6
S	Trace in-flight transactions, 3-4, 6-11
3	-
Scale Out, 7-14	U
Schedule Database Fleet Backup to Recovery	0
Appliance, 2-34	Upgrade existing Oracle Grid Infrastructure, 2-11
Scheduler Central, 10-4	Upgrade Planner, 10-4
Schema and Data Comparisons, 2-13, 2-44	User Defined Deployment Procedures (UDDP),
Schema and Data Synchronization, 2-13, 2-44	2-12, 3-6, 6-2, 6-11, 6-17
Schema Change Plans, 2-13	User flow modeling, 8-2
Schema Comparisons, 2-13, 2-44	User Monitoring, 7-24
Schematic, 10-5	User Session Diagnostics, 8-2
Security, 10-4	User, Role and Credentials Management, 10-3
	Oser, Note and Credentials Management, 10-3
Selective Tracing, 3-8 Self Lindate, 3-44-3-7	
Self Update, 2-44, 3-7 Self convice database provisioning, 4-3	V
Self-service database provisioning, 4-2	
Self-update, 10-3	vCPU Utilization Tracking, 10-3
Server Template Administration, 3-8	
Service Dashboards, 8-6	



## W

WebLogic Cluster Administration, 3-8
WebLogic Domain Administration, 3-8
WebLogic Server Administration, 3-8
WebLogic Server Management Pack EE, 3-1
WebLogic Server Management Pack Enterprise
Edition provisioning, 3-5
WLST Script job, 10-5

Workflow process and policy monitoring, 7-3 Workspace management, 10-4

## Ζ

Zero Data Loss Recovery Appliance Management Pack, 2-33

