Copyright © 2006, 2016, Oracle and/or its affiliates. All rights reserved.

Contributors: Donna Cooksey, Steven Fried, Juan Loaiza, Jill Robinson, Joe Wadleigh, Steve Wertheimer, Padmaja Potineni, Ashwarya Minocha, Roopesh Ashok Kumar

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, 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 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 installed on the hardware, and/or documentation, delivered to U.S. Government end users are “commercial computer software” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. 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 and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon 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, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

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

Preface ........................................................................................................................................................................... v

Audience ........................................................................................................................................................................ v

Documentation Accessibility ........................................................................................................................................ v

Related Documents ................................................................................................................................................. v

Conventions ................................................................................................................................................................ v

1 Oracle Secure Backup Product Family

1.1 Introducing the Oracle Secure Backup Product Family ................................................................. 1-1

1.2 Feature Availability by Centralized Management Edition ................................................................. 1-2

1.3 Oracle Secure Backup Cloud Module ................................................................................................. 1-3

1.4 Special-Use Licensing ......................................................................................................................... 1-3

1.5 Packaging and Support ........................................................................................................................... 1-4

A Third-Party Licenses

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 a question about your licensing needs, then please contact your Oracle sales representative or refer to the resources listed in "Related Documents (page v)" for more information.

Audience

This book is intended for all users of Oracle Secure Backup 12.1.

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 Documents

For more information, see the Software Investment Guide, available at:


Conventions

The following text conventions are used in this document:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>boldface</strong></td>
<td>Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.</td>
</tr>
<tr>
<td><em>italic</em></td>
<td>Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.</td>
</tr>
<tr>
<td>Convention</td>
<td>Meaning</td>
</tr>
<tr>
<td>------------</td>
<td>---------</td>
</tr>
<tr>
<td>monospace</td>
<td>Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.</td>
</tr>
</tbody>
</table>
1

Oracle Secure Backup Product Family

This chapter describes the two Oracle Secure Backup tape management editions along with feature availability and the Oracle Secure Backup Cloud Module.

This chapter contains these sections:

- Introducing the Oracle Secure Backup Product Family (page 1-1)
- Feature Availability by Centralized Management Edition (page 1-2)
- Oracle Secure Backup Cloud Module (page 1-3)
- Special-Use Licensing (page 1-3)
- Packaging and Support (page 1-4)

1.1 Introducing the Oracle Secure Backup Product Family

Oracle Secure Backup is a centralized tape backup management solution providing high performance, heterogeneous data protection in distributed UNIX, Linux, Windows, and Network Attached Storage (NAS) environments. Protecting file-system and Oracle Database data, Oracle Secure Backup provides a complete tape backup solution for your IT environment. In addition to tape backup, Oracle Secure Backup delivers an integrated Oracle Database backup to third-party cloud (Internet) storage, through the Oracle Secure Backup Cloud Module.

Oracle Secure Backup offers two centralized backup management editions for the data center, each suitable for different development and deployment scenarios:

- Oracle Secure Backup is ideally suited for distributed environments consisting of multiple heterogeneous servers with advanced data protection requirements such as encryption, automated rotation of tapes between multiple locations, and protection of NAS devices.

- Oracle Secure Backup Express edition provides reliable data protection for single-server Oracle Database environments backing up to tape. Oracle Secure Backup Express is available free with the Oracle Database and is the same core product as Oracle Secure Backup. The Express edition is limited to a single host with one direct-attached tape drive and has some restrictions on advanced feature usage, as shown in Table 1-1 (page 1-2).

Oracle Secure Backup is licensed per simultaneous backup or restore operation to an Oracle Secure Backup disk pool, configured tape drive and/or Cloud. When using the Oracle Secure Backup centralized backup management solution, a backup or restore operation would include Oracle database or MySQL jobs via integration with the Oracle System Backup Tape (SBT) API as well as file-system jobs. An Oracle Secure Backup license is required for each configured tape drive as one backup or restore stream is in progress at any one time. Oracle Secure Backup disk pools accommodate
simultaneous backup and restore streams and therefore a license would be required for each concurrent job (user-defined maximum number of concurrent jobs) per disk pool. For example, if an Oracle Secure Backup domain included 4 tape drives and one disk pool configured to allow 10 concurrent jobs, a total of 14 licenses would be needed.

The Oracle Secure Backup Cloud Module provides Oracle Database backup to cloud storage using Recovery Manager (RMAN) and is independent of the Oracle Secure Backup data protection management editions at the data center. The Oracle Secure Backup Cloud Module can be used as a complement or replacement for the Oracle Secure Backup centralized management solution or other third-party media-management products.

1.2 Feature Availability by Centralized Management Edition

Table 1-1 (page 1-2) lists the features available in Oracle Secure Backup and Oracle Secure Backup Express. This table explains the differences between Oracle Secure Backup and Oracle Secure Backup Express and helps you to determine which deployment is best for your business.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Oracle Secure Backup Express</th>
<th>Oracle Secure Backup</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated with RMAN for online tape backup and restore of Oracle Database</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup and restore of non-database file-system data to tape</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup and restore to/from disk</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup of Oracle Real Application Clusters (Oracle RAC) environments</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Integrated with Oracle Enterprise Manager Cloud Control starting with Oracle Database 10g Release 2</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multiple tape drive usage within the backup environment</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Fibre attached device support</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Backup encryption to tape</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>RMAN advanced backup compression levels</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>ACSLS support</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Vaulting support (automates rotation of tapes between multiple locations)</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Networked backup of distributed servers and/or tape devices</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
1.3 Oracle Secure Backup Cloud Module

The Oracle Secure Backup Cloud Module delivers Oracle RMAN integration with Amazon S3 using an SBT library specific to Amazon S3.

The Oracle Secure Backup Cloud Module is licensed for each RMAN channel simultaneously used by the backup domain to an Amazon S3 destination. An Oracle Secure Backup Cloud Module license can be shared among multiple Oracle Database backups, as long as the number of RMAN channels for backup to the cloud does not exceed the number of Oracle Secure Backup Cloud Module licenses. For example, if one environment has 12 Oracle Secure Backup Cloud Module licenses, then 3 Oracle Database backups could each use 4 RMAN channels simultaneously or 1 Oracle Database backup could use all 12 RMAN channels at one time as long as no other RMAN channels were being used.

Cloud storage costs associated with Oracle Database backups are set by Amazon S3 and are independent of Oracle. An Amazon S3 user account must be established before performing Oracle RMAN backups directly to Amazon S3 using the Oracle Secure Backup Cloud Module.

Note:
The Oracle Secure Backup Cloud Module is not available with Oracle Secure Backup Express edition.

1.4 Special-Use Licensing

The Oracle Database Enterprise Edition (EE) offers licensed options for some advanced database management technologies. Oracle Secure Backup includes use of two optimizations at no additional cost. These optimizations are normally available only with the purchase of the Oracle Advanced Security Option or the Oracle Advanced Compression Option. This Oracle Secure Backup special-use licensing includes:

- **RMAN backup encryption beginning with Oracle Database 10g Release 2**
  
  Direct to tape is available only when using Oracle Secure Backup. It is not available when using third-party media-management products.
  
  Direct to cloud storage, using Amazon S3, is available when using the Oracle Secure Backup Cloud Module.

- **RMAN backup compression algorithms that would otherwise require Oracle Advanced Compression option**
  
  The RMAN backup compression special-use licensing is available when using the Oracle Secure Backup Cloud Module or the Oracle Secure Backup management solution and is not available with the Oracle Secure Backup Express edition.

The Oracle Secure Backup special-use licenses apply to RMAN backup encryption, which is a component of the Oracle Advanced Security Option, and RMAN backup compression levels, which are components of the Oracle Advanced Compression Option. To use additional features of the Oracle Advanced Security Option or the Oracle Advanced Compression Option, you must license those options separately.
While Oracle Secure Backup supports all editions of Oracle Database, special-use licensing is only available when backing up an Oracle Database Enterprise Edition.

1.5 Packaging and Support

Oracle Secure Backup Express is bundled with the Oracle Database. Support for Oracle Secure Backup Express is provided exclusively through a free Oracle Discussion Forum monitored by Oracle employees as well as community experts.

Updates and technical support are provided only to customers who maintain technical support services for their Oracle licenses in accordance with Oracle’s Technical Support Policies. Oracle Secure Backup is a separately licensed product and is supported in accordance with Oracle’s Technical Support Policies.
This appendix includes third-party license information for all third-party products included with Oracle Secure Backup 12.1. Oracle acknowledges that the following Third Party and Open Source software are used in the provided programs covered by this documentation.

Apache
Apache License
Version 2.0, January 2004
http://www.apache.org/licenses/

TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not
include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. **Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. **Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. **Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:
   a. You must give any other recipients of the Work or Derivative Works a copy of this License; and
   b. You must cause any modified files to carry prominent notices stating that You changed the files; and
   c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and
   d. If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one
of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. **Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. **Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. **Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS
APACHE HTTP SERVER SUBCOMPONENTS:
The Apache HTTP Server includes a number of subcomponents with separate copyright notices and license terms. Your use of the source code for these subcomponents is subject to the terms and conditions of the following licenses.

For the mod_mime_magic component:

mod_mime_magic: MIME type lookup via file magic numbers

Copyright (c) 1996-1997 Cisco Systems, Inc. This software was submitted by Cisco Systems to the Apache Group in July 1997. Future revisions and derivatives of this source code must acknowledge Cisco Systems as the original contributor of this module. All other licensing and usage conditions are those of the Apache Group.

Some of this code is derived from the free version of the file command originally posted to comp.sources.unix. Copyright info for that program is included below as required. Copyright (c) Ian F. Darwin, 1987. Written by Ian F. Darwin.

This software is not subject to any license of the American Telephone and Telegraph Company or of the Regents of the University of California.

Permission is granted to anyone to use this software for any purpose on any computer system, and to alter it and 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 flaws in it.

2. The origin of this software must not be misrepresented, either by explicit claim or by omission. Since few users ever read sources, credits must appear in the documentation.

3. Altered versions must be plainly marked as such, and must not be misrepresented as being the original software. Since few users ever read sources, credits must appear in the documentation.

4. This notice may not be removed or altered.

For the modules\mappers\mod_imagemap.c component:

"macmartinized" polygon code copyright 1992 by Eric Haines, erich@eye.com

For the server\util_md5.c component:

NCSA HTTPd Server
Software Development Group
National Center for Supercomputing Applications
University of Illinois at Urbana-Champaign
605 E. Springfield, Champaign, IL 61820
httpd@ncsa.uiuc.edu

Copyright (C) 1995, Board of Trustees of the University of Illinois

md5.c: NCSA HTTPd code which uses the md5c RSA Code

Original Code Copyright (C) 1994, Jeff Hostetler, Spyglass, Inc.
 Portions of Content-MD5 code Copyright (C) 1993, 1994 by Carnegie Mellon University (see Copyright below).
 Portions of Content-MD5 code Copyright (C) 1991 Bell Communications
Research, Inc. (Bellcore) (see Copyright below).

Portions extracted from mpack, John G. Myers - jgm+@cmu.edu

Content-MD5 Code contributed by Martin Hamilton (martin@net.lut.ac.uk)

these portions extracted from mpack, John G. Myers - jgm+@cmu.edu

(C) Copyright 1993,1994 by Carnegie Mellon University

All Rights Reserved

Permission to use, copy, modify, distribute, and sell this software and its documentation for any purpose is hereby granted without fee, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of Carnegie Mellon University not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Carnegie Mellon University makes no representations about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

CARNEGIE MELLON UNIVERSITY DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL CARNEGIE MELLON UNIVERSITY BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

Copyright (c) 1991 Bell Communications Research, Inc. (Bellcore)

Permission to use, copy, modify, and distribute this material for any purpose and without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies, and that the name of Bellcore not be used in advertising or publicity pertaining to this material without the specific, prior written permission of an authorized representative of Bellcore. BELLCORE MAKES NO REPRESENTATIONS ABOUT THE ACCURACY OR SUITABILITY OF THIS MATERIAL FOR ANY PURPOSE. IT IS PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES.

For the src/lib/apr/include/apr_md5.h component:

This is work is derived from material Copyright RSA Data Security, Inc.

The RSA copyright statement and Licence for that original material is included below. This is followed by the Apache copyright statement and licence for the modifications made to that material.

Copyright (C) 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.
These notices must be retained in any copies of any part of this documentation and/or software.

**For the srclib\apr\passwd\apr_md5.c component:**

This is work is derived from material Copyright RSA Data Security, Inc.

The RSA copyright statement and Licence for that original material is included below. This is followed by the Apache copyright statement and licence for the modifications made to that material.

MD5C.C - RSA Data Security, Inc., MD5 message-digest algorithm

Copyright (C) 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD5 Message-Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

The apr_md5_encode() routine uses much code obtained from the FreeBSD 3.0 MD5 crypt() function, which is licenced as follows:

"THE BEERWARE LICENSE" (Revision 42):

<phk@login.dknet.dk> wrote this file. As long as you retain this notice you can do whatever you want with this stuff. If we meet some day, and you think this stuff is worth it, you can buy me a beer in return. Poul-Henning Kamp.

**For the srclib\apr-util\crypto\apr_md4.c component:**

This is derived from material copyright RSA Data Security, Inc. Their notice is reproduced below in its entirety.

Copyright (C) 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved.

License to copy and use this software is granted provided that it is identified as the "RSA Data Security, Inc. MD4 Message-Digest Algorithm" in all material mentioning or referencing this software or this function.

License is also granted to make and use derivative works provided that such works are identified as "derived from the RSA Data Security, Inc. MD4 Message-Digest Algorithm" in all material mentioning or referencing the derived work.

RSA Data Security, Inc. makes no representations concerning either the merchantability of this software or the suitability of this software for any particular purpose. It is provided "as is" without express or implied warranty of any kind.

These notices must be retained in any copies of any part of this documentation and/or software.

**For the srclib\apr-util\include\apr_md4.h component:**

This is derived from material copyright RSA Data Security, Inc. Their notice is reproduced below in its entirety.

A-6 Licensing Information User Manual
Copyright (C) 1991-2, RSA Data Security, Inc. Created 1991. All rights reserved.
License to copy and use this software is granted provided that it is identified as the
"RSA Data Security, Inc. MD4 Message-Digest Algorithm" in all material mentioning
or referencing this software or this function.
License is also granted to make and use derivative works provided that such works
are identified as "derived from the RSA Data Security, Inc. MD4 Message-Digest
Algorithm" in all material mentioning or referencing the derived work.
RSA Data Security, Inc. makes no representations concerning either the
merchantability of this software or the suitability of this software for any particular
purpose. It is provided "as is" without express or implied warranty of any kind.
These notices must be retained in any copies of any part of this documentation and/or
software.
For the srclib\apr-util\test\testmd4.c component:
This is derived from material copyright RSA Data Security, Inc. Their notice is
reproduced below in its entirety.
Copyright (C) 1990-2, RSA Data Security, Inc. Created 1990. All rights reserved.
RSA Data Security, Inc. makes no representations concerning either the
merchantability of this software or the suitability of this software for any particular
purpose. It is provided "as is" without express or implied warranty of any kind.
These notices must be retained in any copies of any part of this documentation and/or
software.
For the srclib\apr-util\xml\expat\conftools\install-sh component:
install - install a program, script, or datafile
This comes from X11R5 (mit/util/scripts/install.sh).
Copyright 1991 by the Massachusetts Institute of Technology
Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted without fee, provided that the above
copyright notice appear in all copies and that both that copyright notice and this
permission notice appear in supporting documentation, and that the name of M.I.T.
not be used in advertising or publicity pertaining to distribution of the software
without specific, written prior permission. M.I.T. makes no representations about the
suitability of this software for any purpose. It is provided "as is" without express or
implied warranty.
For the srclib\pcre\install-sh component:
Copyright 1991 by the Massachusetts Institute of Technology
Permission to use, copy, modify, distribute, and sell this software and its
documentation for any purpose is hereby granted without fee, provided that the above
copyright notice appear in all copies and that both that copyright notice and this
permission notice appear in supporting documentation, and that the name of M.I.T.
not be used in advertising or publicity pertaining to distribution of the software
without specific, written prior permission. M.I.T. makes no representations about the
suitability of this software for any purpose. It is provided "as is" without express or
implied warranty.
For the pcre component:
PCRE LICENCE
PCRE is a library of functions to support regular expressions whose syntax and semantics are as close as possible to those of the Perl 5 language.

Release 5 of PCRE is distributed under the terms of the "BSD" licence, as specified below. The documentation for PCRE, supplied in the "doc" directory, is distributed under the same terms as the software itself.

Written by: Philip Hazel <ph10@cam.ac.uk>
University of Cambridge Computing Service,
Copyright (c) 1997-2004 University of Cambridge 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 University of Cambridge 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.

End PCRE LICENCE

For the test\zb.c component:

ZeusBench V1.01

This program is Copyright (C) Zeus Technology Limited 1996.

This program may be used and copied freely providing this copyright notice is not removed.

This software is provided "as is" and any express or implied warranties, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall Zeus Technology Ltd. be liable for any direct, indirect, incidental, special, exemplary, or consequential damaged (including, but not limited to, procurement of substitute good or services; loss of use, data, or profits; or business interruption) however caused and on 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.
Written by Adam Twiss (adam@zeus.co.uk). March 1996

Thanks to the following people for their input:

Mike Belshe (mbelshe@netscape.com)
Michael Campanella (campanella@stevms.enet.dec.com)

For the expat xml parser component:

Copyright (c) 1998, 1999, 2000 Thai Open Source Software Center Ltd and Clark Cooper

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.

compress.c 4.0

Copyright (c) 1985, 1986 The Regents of the University of California. All rights reserved.

This code is derived from software contributed to Berkeley by James A. Woods, derived from original work by Spencer Thomas and Joseph Orost.

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

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

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

3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

   This product includes software developed by the University of California, Berkeley and its contributors.

4. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

**glob.c 1.4**

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.

**MD5 Aladdin 1999.05.03**

Copyright (C) 1999 Aladdin Enterprises. All rights reserved.

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.

L. Peter Deutsch
ghost@alladin.com

OpenSSL 1.0.2j

LICENSE ISSUES

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit.

See below for the actual license texts.

OpenSSL License

Copyright (c) 1998-2016 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:

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 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.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com). 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.

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].

**PHP Version 5.4**

The PHP License, version 5.6.26

Copyright (c) 1999 - 2014 The PHP Group. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, is
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 "PHP" must not be used to endorse or promote products derived from
   this software without prior written permission. For written permission, please
   contact group@php.net.

4. Products derived from this software may not be called "PHP", nor may "PHP"
   appear in their name, without prior written permission from group@php.net. You
   may indicate that your software works in conjunction with PHP by saying "Foo
   for PHP” instead of calling it "PHP Foo” or "phpfoo”.

5. The PHP Group may publish revised and/or new versions of the license from
time to time. Each version will be given a distinguishing version number.
   Once covered code has been published under a particular version of the license,
you may always continue to use it under the terms of that version. You may also
choose to use such covered code under the terms of any subsequent version of the
license published by the PHP Group. No one other than the PHP Group has the
right to modify the terms applicable to covered code created under this License.

6. Redistributions of any form whatsoever must retain the following
   acknowledgment:

   "This product includes PHP software, freely available from <http://
   www.php.net/software/>".

THIS SOFTWARE IS PROVIDED BY THE PHP DEVELOPMENT TEAM "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 PHP
DEVELOPMENT TEAM OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT,
INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF
SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR
BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF
LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This software consists of voluntary contributions made by many individuals on behalf of the PHP Group.

The PHP Group can be contacted via Email at group@php.net.

For more information on the PHP Group and the PHP project, please see <http://www.php.net>.