

SOPHOS

Security made simple.

Sophos Anti-Virus for Linux startup guide

Product version: 9

Document date: August 2016



Contents

1	Is this the right guide?.....	3
2	About Sophos Anti-Virus for Linux.....	4
2.1	What Sophos Anti-Virus does.....	4
2.2	How Sophos Anti-Virus protects your computer.....	4
3	System requirements.....	5
4	Install Sophos Anti-Virus across a network.....	6
4.1	Create the CID on the server.....	6
4.2	Install Sophos Anti-Virus from the CID.....	7
5	Install Sophos Anti-Virus on a standalone computer.....	9
6	Check on-access scanning.....	10
6.1	Start on-access scanning.....	10
7	Run an on-demand scan of the computer.....	11
8	What happens if viruses are detected.....	12
9	Uninstall Sophos Anti-Virus.....	14
10	Appendix: Turn Sophos Live Protection on or off.....	15
11	Appendix: Command-line options for mkinstpkg.....	16
12	Technical support.....	18
13	Legal notices.....	19

1 Is this the right guide?

There are three different types of Sophos Anti-Virus for Linux installation.

Before you start, read about them here and make sure you're reading the right startup guide.

Unmanaged installations

In this type of installation, Sophos Anti-Virus is installed on standalone or networked Linux computers, but is not configured or managed centrally.

For this type of installation, continue reading this guide.

Note: We recommend that you use managed Sophos Anti-Virus instead.

Installations managed by Sophos Central

You can install Sophos Anti-Virus for Linux, or upgrade an existing installation, so that it is managed by Sophos Central.

For this type of installation, log on to the Sophos Central management console, go to the **Protect Devices** tab and follow the instructions for Linux there.

Note: If you don't have Sophos Central yet, you'll need to get an account.

Note: If you are using 64-bit Linux servers managed through Sophos Central refer to the [Sophos Linux Security startup guide](#).

Installations managed by Sophos Enterprise Console

You can install Sophos Anti-Virus for Linux so that it is managed by Enterprise Console. See the [Sophos Enterprise Console startup guide for Linux and UNIX](#).

Note: If you don't have Enterprise Console yet, you'll need to install it on a Windows server and do some basic setup.

2 About Sophos Anti-Virus for Linux

2.1 What Sophos Anti-Virus does

Sophos Anti-Virus detects and deals with viruses (including worms and Trojans) on your Linux computer. As well as being able to detect all Linux viruses, it can also detect all non-Linux viruses that might be stored on your Linux computer and transferred to non-Linux computers. It does this by scanning your computer.

2.2 How Sophos Anti-Virus protects your computer

On-access scanning is your main form of protection against viruses. Whenever you open, save or copy a file, Sophos Anti-Virus scans it and grants access to it only if it is safe.

Sophos Anti-Virus also enables you to run an on-demand scan to provide additional protection. An on-demand scan is a scan that you initiate. You can scan anything from a single file to everything on your computer that you have permission to read. You can either manually run an on-demand scan or schedule it to run unattended.

You can find details of all configuration options in the man pages and the [Sophos Anti-Virus for Linux configuration guide](#).

3 System requirements

For system requirements, go to the system requirements page of the Sophos website (<http://www.sophos.com/en-us/products/all-system-requirements.aspx>).

For details of any additional requirements, for example for language support, see the "Additional information" section in the release notes.

4 Install Sophos Anti-Virus across a network

You install Sophos Anti-Virus on networked Linux computers as follows:

1. Create a central installation directory (CID) on a server. This is a set of files that includes everything needed for installation.
2. Install Sophos Anti-Virus across the network from the CID.

4.1 Create the CID on the server

To perform this procedure, you must be logged on to your Linux server as root.

1. Log in to <http://www.sophos.com/en-us/support/downloads.aspx> with your Sophos ID.
2. If you have logged in for downloads before, you see the **Product Downloads and Updates** page.

Note: If this is your first time, you see your profile. Click **Endpoint and Server Protection** and then **Downloads and Updates**.

3. Under **Standalone Installers**, click the link for **Anti-Virus for Linux**
4. On the web page that is displayed, download the Sophos Anti-Virus for Linux, version 9 tarball to a temporary directory, for example `/tmp`.
5. Change to the temporary directory and untar the tarball:

```
tar -xzf tarball
```

6. Run the install script:
`./sophos-av/install.sh`

Note: For information about configuring Sophos Live Protection methods during the installation, see [Appendix: Turn Sophos Live Protection on or off](#) (page 15).

When prompted for the type of auto-update you require, select `SOPHOS`. Enter the username and password that are included with your license.

Sophos Anti-Virus is installed in the directory that you selected.

7. Run the update script to download the central installation files from Sophos:
`/opt/sophos-av/bin/savupdate`

Attention: By default, Sophos Anti-Virus downloads the required Talpa Binary Packs to enable on-access support on the current system. This can be a problem if the system is acting as an update source for Sophos Anti-Virus clients on other kernels/distributions.

- a) If you intend to use the client as an update source for other endpoints then run the update script `/opt/sophos-av/bin/savupdate` with the following option `set PrimaryUpdateAllDistros TRUE`.

This downloads all the Talpa Binary Packs available.

A local cache directory is created by default in `/opt/sophos-av/update/cache/Primary/`.

The local cache directory is the installset that is used to update an installation of Sophos Anti-Virus. The local cache directory updates itself automatically from Sophos. By default, it updates every 60 minutes, provided that the server is connected to the internet.

8. Copy the local cache directory to a location that is accessible by all the other computers on the network to create a CID.

We recommend that the other computers have only read access to the CID.

You have finished creating the CID on the server. Make sure the CID is updated from the local cache directory regularly.

4.2 Install Sophos Anti-Virus from the CID

Having created the CID, you install Sophos Anti-Virus on the rest of the network as follows:

1. Create a deployment package that can be used to install Sophos Anti-Virus on other computers.
2. Install Sophos Anti-Virus on each computer using the deployment package.

4.2.1 Create a deployment package

To perform this procedure, you must be logged on to your Linux server as root.

You can use the `mkinstpkg` script to create a deployment package for your end-users. This script uses the same display as the install script, and the answers gathered are inserted into the deployment package. When the end-user installs from the deployment package, it will not ask them any questions and will set up both the update location and credentials for them correctly. You can create a package in tar, RPM or deb format.

Note: The deb format is supported in Sophos Anti-Virus version 9.11 and later.

Note: The instructions here show how to specify the package format. For details of other options you can use, see [Appendix: Command-line options for mkinstpkg](#) (page 16)

To create a deployment package:

1. Go to the directory `/opt/sophos-av/update/`.
2. To create a package in the current directory, do one of the following:
 - To create a tar format deployment package, called `savinstpkg.tgz`, type:


```
./mkinstpkg
```
 - To create an RPM format deployment package, called `savinstpkg-0.0-1.i586.rpm`, type:


```
./mkinstpkg -r
```
 - To create a deb format deployment package called `savinstpkg.deb`, type:


```
./mkinstpkg -D
```

Note: The deb format is supported in Sophos Anti-Virus version 9.11 and later.

When prompted for the location from which to update, type the address of the CID as it appears to the other computers. Enter the username and password that are required to access that address, if applicable.

A deployment package is created in the format that you specified.

3. Use your own tools to copy this package to the computers where you want to install Sophos Anti-Virus.

4.2.2 Install Sophos Anti-Virus using the deployment package

To perform this procedure, you must be logged on to the computer as root.

On each computer:

1. Place the deployment package in a temporary directory and change to that directory.
2. Do one of the following:

- To install from the tar package, type:

```
tar -zxvf savinstpkg.tgz  
./sophos-av/install.sh
```

- To install from the RPM package, type:

```
rpm -i RPM package
```

- To install from the deb package, type:

```
dpkg -i deb package
```

This copies the necessary files from the server and installs Sophos Anti-Virus.

You have finished installing Sophos Anti-Virus on this computer. Sophos Anti-Virus will update itself automatically from the CID. By default, it will do this every 60 minutes.

Sophos Anti-Virus also sends product and platform information to Sophos to help us with product development. See [Sophos Knowledgebase Article 121214](#).

5 Install Sophos Anti-Virus on a standalone computer

To perform this procedure, you must be logged on to the standalone computer as root.

1. Log in to <http://www.sophos.com/en-us/support/downloads.aspx> with your Sophos ID.
2. If you have logged in for downloads before, you see the **Product Downloads and Updates** page.

Note: If this is your first time, you see your profile. Click **Endpoint and Server Protection** and then **Downloads and Updates**.

3. Under **Standalone Installers**, click the link for **Anti-Virus for Linux**
4. On the web page that is displayed, download the Sophos Anti-Virus for Linux, version 9 tarball to a temporary directory, for example `/tmp`.
5. Change to the temporary directory and untar the tarball:

```
tar -xzf tarball
```

6. Run the install script:
`./sophos-av/install.sh`

Note: For information about configuring Sophos Live Protection methods during the installation, see [Appendix: Turn Sophos Live Protection on or off](#) (page 15).

When prompted for the type of auto-update you require, select `Sophos`. Enter the username and password that are included with your license.

Sophos Anti-Virus is installed in the directory that you selected.

You have finished installing Sophos Anti-Virus on the standalone computer. Sophos Anti-Virus will update itself automatically from Sophos. By default, it will do this every 60 minutes, provided that the computer is connected to the internet.

Sophos Anti-Virus also sends product and platform information to Sophos to help us with product development. See [Sophos Knowledgebase Article 121214](#).

6 Check on-access scanning

On-access scanning is your main form of protection against viruses. Whenever you open, save or copy a file, Sophos Anti-Virus scans it and grants access to it only if it is safe.

By default, on-access scanning is turned on. This section tells you how check that it is turned on, and how to start it if necessary.

Note: To use the commands in this section, you must be logged on as root. The commands in this section assume that you installed Sophos Anti-Virus in the default location, `/opt/sophos-av`. If you did not, substitute the name of the installation directory that you used.

6.1 Start on-access scanning

To start on-access scanning, do one of the following:

- Type:
`/opt/sophos-av/bin/savdctl enable`
- Use the appropriate tool to start the installed service sav-protect. For example, type:
`/etc/init.d/sav-protect start`
or
`service sav-protect start`

7 Run an on-demand scan of the computer

We recommend that you scan the whole computer for viruses right after you install Sophos Anti-Virus. To do this, you run an on-demand scan.

Note: This is especially important if the computer is a server and you want to minimize the risk of spreading viruses to other computers.

- To run an on-demand scan of the computer, type:

```
savscan /
```

8 What happens if viruses are detected

Regardless of whether viruses are detected by on-access scanning or an on-demand scan, by default Sophos Anti-Virus:

- Logs the event in syslog and the Sophos Anti-Virus log.
- Sends an email alert to root@localhost.

Sophos Anti-Virus also displays alerts according to whether the viruses were detected by on-access scanning or an on-demand scan, as explained below.

On-access scanning

If on-access scanning detects a virus, Sophos Anti-Virus denies access to the file and by default displays a desktop pop-up alert like the one shown below.



If the desktop pop-up alert cannot be displayed, a command-line alert is displayed instead.

For information about cleaning up viruses, see the *Sophos Anti-Virus for Linux configuration guide*.

On-demand scans

If an on-demand scan detects a virus, by default Sophos Anti-Virus displays a command-line alert. It reports the virus on the line which starts with >>> followed by either Virus or Virus Fragment:

```
SAVScan virus detection utility
Version 4.69.0 [Linux/Intel]
Virus data version 4.69
Includes detection for 2871136 viruses, Trojans and worms
Copyright (c) 1989-2012 Sophos Limited. All rights reserved.
```

```
System time 13:43:32, System date 11 June 2012

IDE directory is: /opt/sophos-av/lib/sav

Using IDE file nyrate-d.ide
. . . . .
Using IDE file injec-lz.ide

Quick Scanning

>>> Virus 'EICAR-AV-Test' found in file /usr/mydirectory/eicar.src

33 files scanned in 2 seconds.
1 virus was discovered.
1 file out of 33 was infected.
Please send infected samples to Sophos for analysis.
For advice consult www.sophos.com or email support@sophos.com
End of Scan.
```

For information about cleaning up viruses, see the *Sophos Anti-Virus for Linux configuration guide*.

9 Uninstall Sophos Anti-Virus

- To uninstall Sophos Anti-Virus, go to each Linux computer and run the uninstall script:
`/opt/sophos-av/uninstall.sh`

If the `savd` daemon is running, the script prompts you to stop it.

The uninstall script deletes:

- All entries from the system startup that are associated with Sophos Anti-Virus.
- The Sophos Anti-Virus man pages in `/usr/share/man`.
- The `savscan` on-demand scanner in `/usr/local/bin`.
- `/opt/sophos-av` and its contents.

10 Appendix: Turn Sophos Live Protection on or off

Sophos Anti-Virus offers Live Protection, which uses in-the-cloud technology to decide instantly whether a suspicious file is a threat and take action as specified in the cleanup configuration.

Live Protection is turned on by default if you are installing Sophos Anti-Virus for the first time. If you are upgrading from a previous version of Sophos Anti-Virus, it is turned off. You can choose to turn Live Protection on or off during the installation of Sophos Anti-Virus on a standalone computer or if you are creating a CID.

To turn Live Protection on or off, use the `--live-protection` option with the install script. For example:

- To turn Live Protection off, type:

```
./sophos-av/install.sh --live-protection=false
```

- To turn Live Protection on, type:

```
./sophos-av/install.sh --live-protection=true
```

The Live Protection settings can also be modified after the installation. For information, see the [Sophos Anti-Virus for Linux configuration guide](#)

11 Appendix: Command-line options for mkinstpkg

The mkinstpkg tool creates a deployment package that end users can use to install Sophos Anti-Virus.

The default installation location is `/opt/sophos-av/update`.

Here is a full list of the command-line options you can use with mkinstpkg. "=" at the end of the option means it takes an argument.

Option	Description
<code>-d,--debug</code>	Use the <code>--debug</code> option when the Sophos Anti-Virus installer is run.
<code>-h,--help</code>	Output help text
<code>-o=,--output=</code>	Destination for the package
<code>-r,--rpm</code>	Build an RPM package
<code>-D,--deb</code>	Build a DEB package
<code>--tar</code>	Build a tar file (default)
<code>--update-proxy-address=</code>	Proxy address to use when installing Sophos Anti-Virus over HTTP
<code>--update-proxy-username=</code>	Proxy username to use when installing Sophos Anti-Virus over HTTP
<code>--update-proxy-password=</code>	Proxy password to use when installing Sophos Anti-Virus over HTTP
<code>--extra-options=</code>	Extra installer options to use when installing Sophos Anti-Virus, for example: <code>--extra-options="--preferFanotify"</code>
<code>-v,--verbose</code>	Use the <code>--verbose</code> option when the Sophos Anti-Virus installer is run.
<code>--rpm-version=</code>	RPM version if building an RPM package
<code>--rpm-release=</code>	RPM release version if building an RPM package
<code>--sophos</code>	Update from Sophos rather than your own server

Option	Description
--update-type=	Specify where Sophos Anti-Virus will update from. Use "s" for updates from Sophos, or anything other than "s" for updates from your own server.
--sec-group=	The Enterprise Console group that computers will be added to when Sophos Anti-Virus is installed

12 Technical support

You can find technical support for Sophos products in any of these ways:

- Visit the Sophos Community at community.sophos.com/ and search for other users who are experiencing the same problem.
- Visit the Sophos support knowledgebase at www.sophos.com/en-us/support.aspx.
- Download the product documentation at www.sophos.com/en-us/support/documentation.aspx.
- Open a ticket with our support team at <https://secure2.sophos.com/support/contact-support/support-query.aspx>.

13 Legal notices

Copyright © 2016 Sophos Limited. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise unless you are either a valid licensee where the documentation can be reproduced in accordance with the license terms or you otherwise have the prior permission in writing of the copyright owner.

Sophos, Sophos Anti-Virus and SafeGuard are registered trademarks of Sophos Limited, Sophos Group and Utimaco Safeware AG, as applicable. All other product and company names mentioned are trademarks or registered trademarks of their respective owners.

ACE™, TAO™, CIAO™, DAnCE™, and CoSMIC™

ACE™, TAO™, CIAO™, DAnCE™, and CoSMIC™ (henceforth referred to as "DOC software") are copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University, Copyright (c) 1993-2014, all rights reserved. Since DOC software is open-source, freely available software, you are free to use, modify, copy, and distribute—perpetually and irrevocably—the DOC software source code and object code produced from the source, as well as copy and distribute modified versions of this software. You must, however, include this copyright statement along with any code built using DOC software that you release. No copyright statement needs to be provided if you just ship binary executables of your software products.

You can use DOC software in commercial and/or binary software releases and are under no obligation to redistribute any of your source code that is built using DOC software. Note, however, that you may not misappropriate the DOC software code, such as copyrighting it yourself or claiming authorship of the DOC software code, in a way that will prevent DOC software from being distributed freely using an open-source development model. You needn't inform anyone that you're using DOC software in your software, though we encourage you to let us know so we can promote your project in the [DOC software success stories](#).

The ACE, TAO, CIAO, DAnCE, and CoSMIC web sites are maintained by the DOC Group at the Institute for Software Integrated Systems (ISIS) and the Center for Distributed Object Computing of Washington University, St. Louis for the development of open-source software as part of the open-source software community. Submissions are provided by the submitter "as is" with no warranties whatsoever, including any warranty of merchantability, noninfringement of third party intellectual property, or fitness for any particular purpose. In no event shall the submitter be liable for any direct, indirect, special, exemplary, punitive, or consequential damages, including without limitation, lost profits, even if advised of the possibility of such damages. Likewise, DOC software is provided as is with no warranties of any kind, including the warranties of design, merchantability, and fitness for a particular purpose, noninfringement, or arising from a course of dealing, usage or trade practice. Washington University, UC Irvine, Vanderbilt University, their employees, and students shall have no liability with respect to the infringement of copyrights, trade secrets or any patents by DOC software or any part thereof. Moreover, in no event will Washington University, UC Irvine, or Vanderbilt University, their employees, or students be liable for any lost revenue or profits or other special, indirect and consequential damages.

DOC software is provided with no support and without any obligation on the part of Washington University, UC Irvine, Vanderbilt University, their employees, or students to assist in its use, correction, modification, or enhancement. A [number of companies](#) around the world provide commercial support for DOC software, however. DOC software is Y2K-compliant, as long as the underlying OS platform is Y2K-compliant. Likewise, DOC software is compliant with the new US daylight savings rule passed by Congress as "The Energy Policy Act of 2005," which established new daylight savings times (DST) rules for the United States that expand DST as of March 2007. Since DOC software obtains time/date and calendaring information from operating systems users will not be affected by the new DST rules as long as they upgrade their operating systems accordingly.

The names ACE™, TAO™, CIAO™, DAnCE™, CoSMIC™, Washington University, UC Irvine, and Vanderbilt University, may not be used to endorse or promote products or services derived from this source without express written permission from Washington University, UC Irvine, or Vanderbilt University. This license grants no permission to call products or services derived from this source ACE™, TAO™, CIAO™, DAnCE™, or CoSMIC™, nor does it grant permission for the name Washington University, UC Irvine, or Vanderbilt University to appear in their names.

If you have any suggestions, additions, comments, or questions, please let [me](#) know.

[Douglas C. Schmidt](#)

GNU General Public License

Some software programs are licensed (or sublicensed) to the user under the GNU General Public License (GPL) or similar Free Software licenses which, among other rights, permit the user to copy, modify, and redistribute certain programs, or portions thereof, and have access to the source code. The GPL requires for any software licensed under the GPL, which is distributed to a user in an executable binary format, that the source code also be made available to those users. For any such software which is distributed along with this Sophos product, the source code is available by submitting a request to Sophos via email to savlinuxgpl@sophos.com. A copy of the GPL terms can be found at www.gnu.org/copyleft/gpl.html

libmagic – file type detection

Copyright © Ian F. Darwin 1986, 1987, 1989, 1990, 1991, 1992, 1994, 1995.

Software written by Ian F. Darwin and others; maintained 1994–2004 Christos Zoulas.

This software is not subject to any export provision of the United States Department of Commerce, and may be exported to any country or planet.

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 immediately at the beginning of the file, without modification, this list of conditions, and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR

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

OpenSSL Cryptography and SSL/TLS Toolkit

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. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact openssl-core@openssl.org.

OpenSSL license

Copyright © 1998–2011 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 © 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 Netscape's SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered 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 routines 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 license 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 license [including the GNU Public License.]

Protocol Buffers (libprotobuf)

Copyright 2008, Google Inc.

All rights reserved.

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

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name of Google Inc. nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

Code generated by the Protocol Buffer compiler is owned by the owner of the input file used when generating it. This code is not standalone and requires a support library to be linked with it. This support library is itself covered by the above license.

pycrypto

Distribute and use freely; there are no restrictions on further dissemination and usage except those imposed by the laws of your country of residence. This software is provided "as is" without warranty of fitness for use or suitability for any purpose, express or implied. Use at your own risk or not at all.

Incorporating the code into commercial products is permitted; you do not have to make source available or contribute your changes back (though that would be nice).

– amk (www.amk.ca)

Python

PYTHON SOFTWARE FOUNDATION LICENSE VERSION 2

1. This LICENSE AGREEMENT is between the Python Software Foundation ("PSF"), and the Individual or Organization ("Licensee") accessing and otherwise using this software ("Python") in source or binary form and its associated documentation.

2. Subject to the terms and conditions of this License Agreement, PSF hereby grants Licensee a nonexclusive, royalty-free, worldwide license to reproduce, analyze, test, perform and/or display publicly, prepare derivative works, distribute, and otherwise use Python alone or in any derivative version, provided, however, that PSF's License Agreement and PSF's notice of copyright, i.e., "Copyright © 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009 Python Software Foundation; All Rights Reserved" are retained in Python alone or in any derivative version prepared by Licensee.
3. In the event Licensee prepares a derivative work that is based on or incorporates Python or any part thereof, and wants to make the derivative work available to others as provided herein, then Licensee hereby agrees to include in any such work a brief summary of the changes made to Python.
4. PSF is making Python available to Licensee on an "AS IS" basis. PSF MAKES NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, PSF MAKES NO AND DISCLAIMS ANY REPRESENTATION OR WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF PYTHON WILL NOT INFRINGE ANY THIRD PARTY RIGHTS.
5. PSF SHALL NOT BE LIABLE TO LICENSEE OR ANY OTHER USERS OF PYTHON FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS AS A RESULT OF MODIFYING, DISTRIBUTING, OR OTHERWISE USING PYTHON, OR ANY DERIVATIVE THEREOF, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.
6. This License Agreement will automatically terminate upon a material breach of its terms and conditions.
7. Nothing in this License Agreement shall be deemed to create any relationship of agency, partnership, or joint venture between PSF and Licensee. This License Agreement does not grant permission to use PSF trademarks or trade name in a trademark sense to endorse or promote products or services of Licensee, or any third party.
8. By copying, installing or otherwise using Python, Licensee agrees to be bound by the terms and conditions of this License Agreement.

TinyXML XML parser

www.sourceforge.net/projects/tinyxml

Original code by Lee Thomason (www.grinninglizard.com)

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.

zlib data compression library

Copyright © 1995–2013 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 jloup@gzip.org

Mark Adler madler@alumni.caltech.edu