

CA Embedded Entitlements Manager

Release Notes

r8.4 SP4



This documentation, which includes embedded help systems and electronically distributed materials, (hereinafter referred to as the "Documentation") is for your informational purposes only and is subject to change or withdrawal by CA at any time.

This Documentation may not be copied, transferred, reproduced, disclosed, modified or duplicated, in whole or in part, without the prior written consent of CA. This Documentation is confidential and proprietary information of CA and may not be disclosed by you or used for any purpose other than as may be permitted in (i) a separate agreement between you and CA governing your use of the CA software to which the Documentation relates; or (ii) a separate confidentiality agreement between you and CA.

Notwithstanding the foregoing, if you are a licensed user of the software product(s) addressed in the Documentation, you may print or otherwise make available a reasonable number of copies of the Documentation for internal use by you and your employees in connection with that software, provided that all CA copyright notices and legends are affixed to each reproduced copy.

The right to print or otherwise make available copies of the Documentation is limited to the period during which the applicable license for such software remains in full force and effect. Should the license terminate for any reason, it is your responsibility to certify in writing to CA that all copies and partial copies of the Documentation have been returned to CA or destroyed.

TO THE EXTENT PERMITTED BY APPLICABLE LAW, CA PROVIDES THIS DOCUMENTATION "AS IS" WITHOUT WARRANTY OF ANY KIND, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NONINFRINGEMENT. IN NO EVENT WILL CA BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY LOSS OR DAMAGE, DIRECT OR INDIRECT, FROM THE USE OF THIS DOCUMENTATION, INCLUDING WITHOUT LIMITATION, LOST PROFITS, LOST INVESTMENT, BUSINESS INTERRUPTION, GOODWILL, OR LOST DATA, EVEN IF CA IS EXPRESSLY ADVISED IN ADVANCE OF THE POSSIBILITY OF SUCH LOSS OR DAMAGE.

The use of any software product referenced in the Documentation is governed by the applicable license agreement and such license agreement is not modified in any way by the terms of this notice.

The manufacturer of this Documentation is CA.

Provided with "Restricted Rights." Use, duplication or disclosure by the United States Government is subject to the restrictions set forth in FAR Sections 12.212, 52.227-14, and 52.227-19(c)(1) - (2) and DFARS Section 252.227-7014(b)(3), as applicable, or their successors.

Copyright © 2010 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

CA Product References

This document references the following CA products:

- CA® Embedded Entitlements Manager (CA EEM)
- CA® Directory
- CA® SiteMinder® Web Access Manager (CA SiteMinder)
- CA® Security Command Center
- CA® Integrated Threat Management
- CA® Enterprise Log Manager

Contact CA

Contact CA Support

For your convenience, CA provides one site where you can access the information you need for your Home Office, Small Business, and Enterprise CA products. At <http://ca.com/support>, you can access the following:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA product documentation, you can send a message to techpubs@ca.com.

If you would like to provide feedback about CA product documentation, complete our short customer survey, which is available on the CA Support website at <http://ca.com/docs>.

Contents

Chapter 1: Welcome	9
Chapter 2: Operating System Support	11
Chapter 3: System Requirements	13
Windows	13
UNIX and Linux	14
Chapter 4: Installation Considerations	15
Supported Versions of iGateway.....	15
Enable JVM Settings in CA EEM.....	16
Supported FIPS Modes.....	17
Chapter 5: Upgrade Considerations	19
Before you Upgrade	19
Server Cache Update Time.....	19
Setting Events to Cache.....	19
Default Reports and Panels.....	20
Archive Files Are Converted to Cold Database Files.....	20
MDB Database Migration.....	20
Chapter 6: General Considerations	21
Communication between CA EEM Server and Client Is Broken in an IPv6 Environment.....	21
Run Safex.....	22
Chapter 7: New Features	23
New Safex Options.....	23
Chapter 8: Changes to Existing Features	25
Changes in CA EEM r8.4 SP4.....	25
Changes to Safex XML.....	25
Changes to Installer.....	25
Changes in CA EEM r8.4 SP3.....	26

Changes to Installer.....	26
Changes to Methods in CA EEM SDK.....	26
Deprecated APIs in C# SDK.....	27
Deprecated Methods in Java SDK.....	28
Deprecated APIs in C++ SDK.....	29
Changes to eiam.config File.....	29
Changes to iPoz.conf File.....	30
Changes to Safex XML.....	30
Issuing Certificates Using Safex.....	31
Changes to Display of Filters in GUI.....	32
Changes to setBackend() API.....	32
Case Sensitivity of Attributes during Policy Evaluation.....	32
Changes in CA EEM r8.4 SR02.....	33
rotateLogFile API in CA EEM C++ SDK.....	33
Constructors Deprecated from Java SDK.....	33
Packaging of log4j.....	34
Changes to Logger Configuration File.....	34
Changes in CA EEM r8.4 SR01.....	34
Changes to CA EEM SDK Logging.....	34
Changes in CA EEM r8.4.....	34
JRE Requirement for CA EEM Installation.....	35
Changes to Event Logging.....	35

Chapter 9: Fixed Issues List **37**

Issues Fixed in CA EEM r8.4 SP3.....	37
Issues Fixed in CA EEM r8.4 SR02.....	37
Issues Fixed in CA EEM r8.4 SR01.....	39

Chapter 10: Known Issues **41**

CA EEM Java Authentication API Takes 20 Seconds.....	42
Error Messages are Displayed When iGateway Service is Started or Stopped.....	42
SponsorHandler::loadSponsor Error Messages in igateway.log file.....	43
SAML Authentication and CA SiteMinder Integration Do Not Work When the CA EEM Server is in FIPS-only Mode.....	43
Cannot Log Into CA EEM Server with a Custom Created User EiamAdmin.....	43
Delegation Policies.....	44
Error in Custom Installation.....	44
Error in CA EEM Server Installation.....	45
Error Using CA EEM Java SDK.....	45
Error Using Kerberos Authentication.....	46
Error Using WebLogic 8.1 Application Server.....	46

Error Using XACML and SPML Services	47
Export Application Takes Time.....	47
Unable to Launch CA EEM GUI After Uninstalling CA Audit.....	48
Unable to Launch CA EEM GUI After Installing CA Integrated Threat Management	48
Unable to Launch CA EEM GUI After Uninstalling CA Integrated Threat Management.....	49
Custom Reports Fails to Load or Takes a Long Time to Load	50
Application Data is Missing After Connecting to CA SiteMinder.....	51
Search for Users or Groups When Connected to CA SiteMinder Takes a Long Time to Complete	51
SAML Does Not Work After Upgrading From r8.2.1 to the Current Release	52
Event Log Settings Not Displayed.....	52
Global Group Memberships Are Not Displayed Correctly for Custom Mapped Sun One Directory.....	53
Archive Query Fails.....	53
Archive Query Results Are Not Refreshed	53
Storage Folder Field Under Event Log Settings	53
Memory Size on HP-UX	54
Authentication to an SSL Enabled Directory over Non-SSL Port Fails	54
Chapter 11: Limitations	55
CA Integrated Threat Management r8.0.....	55
Display Limitations in User Interface.....	55
CA EEM Server Operating System Requirements for Kerberos Authentication.....	56
CA EEM SiteMinder Integration	56
Policy Limitation on HP-UX.....	56
Chapter 12: Published Fixes	57
Chapter 13: Bookshelf	59
Chapter 14: International Support	61
Appendix A: Third-Party License Agreements	63
Softwares Under the Apache License.....	64
Adaptive Communication Environment (ACE) 5.5.10	68
Adobe Flex SDK 3.4.....	70
Castor 0.9.5.4	76
Expat 2.0.1.....	77
libcurl 7.18.2.....	78
Libxml2 2.6.27	79
Libxslt 1.1.18	80
Microsoft Cabinet File Software Development Kit (CAB SDK) 1	82

MIT Kerberos v5 release1.4.....	83
NUNIT 2.2.8.....	86
Aleksey XML Security Library v.1.2.9 and the xmlsec-nss Library.....	87
Mozilla Public License v1.1 for xmlsec-nss.....	89
xmlsec-gnutls.....	99
OpenSSL 0.9.8.d and 0.9.8.h.....	100
OpenLDAP 2.4 and 2.3.20.....	103
PCRE 6.3.....	104
zlib 1.2.3.....	106
ZThread 2.3.2.....	106

Chapter 1: Welcome

Welcome to Embedded Entitlements Manager (CA EEM). This document contains information about product installation considerations, operating system support, new features, changes to existing features, known issues, third-party acknowledgements, and information about contacting CA Technical Support.

Chapter 2: Operating System Support

CA EEM Server and the CA EEM SDK require that you have one of the following operating systems installed:

Platform	Architecture	Version
Windows	x86/32-bit	Microsoft Windows 2008 SP2 Microsoft Windows Server 2003 SP2 Microsoft Windows Server 2003 R2 SP2 Microsoft Windows Vista SP1 (CA EEM SDK only) Microsoft Windows XP Professional SP3 (CA EEM SDK only) Note: CA EEM runs as a 32-bit application on 64-bit operating systems.
Solaris	SPARC/32-bit and 64-bit	Sun Solaris 10 (Ultra SPARC) with GNU tar 1.15.1 Sun Solaris 9 (Ultra SPARC) with GNU tar 1.15.1 Sun Logical Domains (LDOM) (run CA EEM as a 32-bit application)
Linux	x86/32-bit	SUSE Linux Enterprise Server 10, Service Pack 1 (CA EEM SDK only) SUSE Linux Enterprise Server 9.0 Service Pack 3, glibc 2.3.2 Red Hat Enterprise Linux Server 5, Update 1 with libcompat libraries (CA EEM SDK only) Red Hat Enterprise Linux Server 4, Updates 3 and 6 with libcompat libraries Red Hat Enterprise Linux AS4, Update 3 Red Hat Enterprise Linux 3.0 Update 7, glibc 2.3.2
IBM AIX	Power5/32-bit and 64-bit	IBM AIX 6.1 IBM AIX 5.3 with Maintenance Level 9, libcompat.1.o library Note: CA EEM runs as a 32-bit application on 64-bit operating systems.
HP-UX	PA RISC/32-bit	HP-UX 11iv2, libcompat.1.o library HP-UX 11iv3 HP-UX 11.11 with PHCO_31903 Patch, libcompat.1.o library

CA supports these operating systems for the duration of their life cycle (as determined by the operating system's manufacturer or until CA announces that we are dropping support). Visit our website <http://ca.com/support> for the latest information about supported operating systems.

Chapter 3: System Requirements

This section contains the following topics:

[Windows](#) (see page 13)

[UNIX and Linux](#) (see page 14)

Windows

The minimum system requirements are:

- An Intel Pentium or higher computer with a CD-ROM drive
 - At least 256 MB of RAM (1GB recommended)
 - 1 GB of hard disk free space, plus enough space for the directory data
 - At least 300 MB disk space required under the temporary directory %temp% (C:\Documents and Settings\Administrator\Local Settings\Temp\), where the CA EEM installation files are extracted during installation
 - Windows updates applied, that is Windows Installer v3 or later
 - Winsock-compatible TCP/IP installed and configured
 - Windows administrator access to the system
 - 32-bit Java Runtime Environment 1.6 if you are planning to integrate CA EEM with CA SiteMinder
- Note:** CA EEM can be installed and used without JRE. For more information on how to install CA EEM without JRE, see the *Getting Started Guide*.
- Adobe Acrobat Reader 8.0 to view the print format of the documentation
 - Internet Browser to run the Web components (Microsoft Internet Explorer 6.0 and higher or Firefox1.6).
 - Microsoft Internet Explorer 7.0 or Firefox 2.0 and higher if using IPv6 environment
 - Microsoft Internet Explorer 7.0 and Firefox 3.0 for viewing the CA EEM admin GUI in FIPS-only mode.
 - Flash to view reports
 - Microsoft .Net 2.5 framework to run CA EEM C# SDK based applications.

UNIX and Linux

The minimum system requirements are:

- At least 256 MB RAM (2 GB recommended)
- 1 GB of hard disk free space, plus enough space for the directory data
- At least 300 MB disk space required under the temporary directory (/tmp) where the CA EEM installation files are extracted during installation.
- 32-bit Java Runtime Environment 1.6 if you are planning to integrate CA EEM with CA SiteMinder

Note: CA EEM can be installed and used without JRE. For more information on how to install CA EEM without JRE, see the *Getting Started Guide*.

- Adobe Acrobat Reader to view the print format of the documentation (Reader 5.0.10 for Solaris and Reader 7.0 for Linux)
- Internet Browser to run the Web components (Firefox 1.6 or higher).
- Firefox 3.0 for viewing the CA EEM admin GUI in FIPS-only mode.
- The person installing CA EEM should have:
 - General UNIX system administration skills
 - Superuser (root) access to the system

Chapter 4: Installation Considerations

Installation and upgrade procedures for this release of CA EEM are described in the *Getting Started* guide. Additionally, ensure you have the following components installed on your computer before you install and configure CA EEM:

- Windows Installer 3.1 before installing CA EEM Server on Windows platform
- Java Runtime Environment (JRE). CA EEM has been certified with JRE 1.6.

Supported Versions of iGateway

CA EEM supports x86 or 64-bit versions of iGateway. CA EEM is compatible with CA products that install 64-bit versions of iGateway on the same computer as CA EEM.

Enable JVM Settings in CA EEM

If you skipped providing JRE path settings during CA EEM installation and later want to integrate with CA SiteMinder or authenticate using SAML, you must first enable JVM settings in CA EEM.

To enable JVM settings

1. Install JRE.
2. Set JAVA_HOME environmental variable.
3. Stop iGateway service.
4. Edit igateway.conf to add the following JVM settings:

```
<JVMSettings>
  <loadjvm>true</loadjvm>
  <javahome>"java path"</javahome>
  <!-- <Properties name="prop-1">
    <system-properties></system-properties>
  </Properties> -->
  <Properties name="eem.endorsed.dirs">

    <system-properties>java.endorsed.dirs=$IGW_LOC$/endorsed</system-properti
es>

  </Properties>
  <Properties name="eem.ext.dirs">
    <system-properties>java.ext.dirs="java
path"/lib/ext</system-properties>
  </Properties>
</JVMSettings>
```

Note: \$IGW_LOC is the install location of iGateway and java path is the install location of JRE.

5. Add the following tags to the JVM settings for Linux platforms only:

```
<!-- <Properties name="prop-1">
  <system-properties></system-properties>
<Properties name="jvm_heapsize">
  <jvm-property>-Xmx256m</jvm-property>
</Properties> -->
```

6. Save igateway.conf file.
7. Start iGateway service.

The JVM settings are enabled in CA EEM.

Supported FIPS Modes

By default CA EEM is installed in a non-FIPS mode. FIPS-only mode can be configured during installation or post-installation.

CA EEM does not support FIPS-only mode with SAML and SELinux operating systems.

Chapter 5: Upgrade Considerations

This section contains the following topics:

[Before you Upgrade](#) (see page 19)

[Server Cache Update Time](#) (see page 19)

[Setting Events to Cache](#) (see page 19)

[Default Reports and Panels](#) (see page 20)

[Archive Files Are Converted to Cold Database Files](#) (see page 20)

[MDB Database Migration](#) (see page 20)

Before you Upgrade

We recommend that you back up CA EEM server data, configuration files, events, and iTechnology folders before upgrading to the current version of CA EEM.

Note: For more information on how to back up your CA EEM data and configuration files, see the *Getting Started Guide*.

Server Cache Update Time

The current version of CA EEM updates the server Cache Update Time to 24 hours. If you have used a different value from the default value for Cache Update Time before the upgrade, CA EEM upgrade overwrites the value.

Note: You can modify the Cache Update Time when configuring references to external directory. For more information on configuring references to an external directory, see the *Online Help*.

Setting Events to Cache

During upgrade, the CA EEM installer updates the EventsToCache setting to 100. If you have used a different value from the default value for EventsToCache before the upgrade, the upgrade overwrites the value.

Note: EventsToCache setting is available in the iControl.conf file under iTechnology folder.

Default Reports and Panels

During upgrade from versions before CA EEM r8.4 to the current version, CA EEM overwrites the definitions of default reports and panels. If you have customized the default reports and panels from CA EEM r8.2.1, you must rename your customized reports and panels before upgrading to the current version.

Archive Files Are Converted to Cold Database Files

When you upgrade from CA EEM r8.2.1 to the current version of CA EEM, the archive files will be converted to cold db files and are stored under your Archived Directory.

MDB Database Migration

When you upgrade from a CA MDB CA EEM installation to the current version of CA EEM, the data in the CA MDB database is migrated to CA Directory. After the migration, the data in the CA MDB is moved to CA Directory.

Chapter 6: General Considerations

Communication between CA EEM Server and Client Is Broken in an IPv6 Environment

Valid on Windows

Symptom:

The communication between a client and its server is broken in an IPv6 environment.

Solution:

In an IPv6 environment, the aforementioned platforms cannot communicate with the DNS server to resolve IPv6 addresses to host names. Hence, the communication between a client and its server is broken. You must perform the following steps to enable communication:

1. Open the hosts file located in the following folder:

<Windows_install_drive>\WINDOWS\system32\drivers\etc

2. Add the IP address and host name of the destination computer to the existing IP addresses and host names in the following format:

IPv6_Address Hostname

For example, 2002:9b23:2d52::b892:c8f3:5695:fd5c GPC00015, where 2002:9b23:2d52::b892:c8f3:5695:fd5c is the IP Address and GPC00015 is the host name of the corresponding computer.

3. Save and close the hosts file.

The IPv6 address of the destination computer is mapped to the host name of the destination computer.

Note: You must repeat this procedure on all client and their corresponding server computers. For more information on IPv6 and Windows, see the following link: <http://www.microsoft.com/technet/network/ipv6/ipv6faq.mspx>

Run Safex

To run Safex on computers where the CA EEM Server is not deployed, install the following on the computers:

- Microsoft Visual C++ 2005 SP1 run-time installed
- CAPKI

To install CAPKI

1. CAPKI installer is found at the following location on the computer where CA EEM SDK is installed:
 - **Windows:** %EIAM_SDK%\capki
 - **UNIX and Linux:** \$EIAM_SDK\capki
2. Install CAPKI on your target computer where you want to run Safex.

Chapter 7: New Features

This section contains the following topics:

[New Safex Options](#) (see page 23)

New Safex Options

From this release, the CA EEM Server stores global user passwords in a SHA1 encoded digest format in the internal user store. Global users with MD5 encoded passwords are not supported. To create and use SHA1 encoded digests, the following options are added to Safex.

-sha1encodddigest

Converts a cleartext password to a SHA1 encoded digest.

DirectoryPasswordDigest

Specifies the global user password in a SHA1 encoded digest format. This tag is added to the Safex XML.

Use these options when you are managing global users through Safex. For example, when you are adding a global user to the internal data store, do the following:

1. Use Safex to convert a cleartext password to a SHA1 encoded digest.

```
safex.exe -sha1encodddigest <password>
```

2. Specify the encoded digest from Step 1 in the Safex XML using the DirectoryDigestPassword tag.

```
<GlobalUser>  
<UserName>securityguard</UserName>  
<DirectoryPasswordDigest>encodeddigestfromStep1</DirectoryPasswordDigest>  
<Description>Security Guard</Description>  
<JobTitle>Lieutenant</JobTitle>  
<FirstName>Security</FirstName>  
<LastName>Guard</LastName>  
<DisplayName>Security Guard</DisplayName>  
</GlobalUser>
```

Note: For more information about this new option, see the Safex Command Line Reference chapter and Global User Examples in the *Programming Guide*.

Chapter 8: Changes to Existing Features

This section contains the following topics:

[Changes in CA EEM r8.4 SP4](#) (see page 25)

[Changes in CA EEM r8.4 SP3](#) (see page 26)

[Changes in CA EEM r8.4 SR02](#) (see page 33)

[Changes in CA EEM r8.4 SR01](#) (see page 34)

[Changes in CA EEM r8.4](#) (see page 34)

Changes in CA EEM r8.4 SP4

The following topics explain the changes that were made to CA EEM since CA EEM r8.4 SP3 GA.

Changes to Safex XML

The PasswordDigest tag that is used to specify a global user password has been deprecated. Instead, use the DirectoryPasswordDigest tag to specify a global user password.

Changes to Installer

The following CA EEM Server installation parameters are removed from the installer. The CA EEM Server no longer uses these ports.

Installation Parameter	Reason
ssldport	In earlier releases, the SSL functionality was provided by the SSLD service, and ssldport was required to handle certificate authentication. From this release, the DSA process of the CA Directory handles the SSL functionality to provide certificate authentication.
dxadminport	DXadmin is no longer essential for installing CA Directory.

Changes in CA EEM r8.4 SP3

The following topics explain the changes that were made to CA EEM since CA EEM r8.4 SR02 GA.

Changes to Installer

The following changes are made to the CA EEM installer:

- CAPKI is installed with CA EEM Server and CA EEM SDK.
- New parameters `-capkiinstalldir` and `-dxadminport` are added to the CA EEM Server installation parameters. Use this parameter to customize the CAPKI installation folder and the dxadmin port respectively.

Note: For more information about the new parameter, see the *Getting Started Guide*.

- JRE is required for the CA EEM Server installation on HP-UX.

Changes to Methods in CA EEM SDK

The following methods are overloaded to accept SafeCertificate object as an argument:

- `issueCertificate`
- `issueCertificateForUser`
- `issueCertificateForSession`
- `registerApplicationInstance`
- `authenticateWithCertificate`
- `fastauthenticateWithCertificate`

Note: For more information about the signatures of these methods, see the *Programming Guide with SDK Documentation*.

Deprecated APIs in C# SDK

The following methods are deprecated in the CA EEM C# SDK:

- SafeAuthorizationResult.List
- SafeContext.authenticateWithCertificate (String certfile, String password)
- SafeContext.fastAuthenticateWithCertificate (String certfile, String password)
- SafeContext.registerApplicationInstance (SafeApplicationInstance ai, String certfile, String password)
- SafeContextFactory.getSafeContext (String backend, String appInstance, FileInfo certFile, String certPassword, CultureInfo locale, String cachefile)
- SafeGlobalUser.DirectoryPassword ()
- SafeGlobalUser.PasswordDigest ()
- SafeUtil.buildDigest (String data, int size)
- SafeUtil.buildPasswordDigest (String password)
- SafeUtil.DebugFile ()
- SafeUtil.DebugLevel ()
- SafeUtil.disableDebug ()
- SafeUtil.enableDebug ()
- SafeUtil.isDebugEnabled ()
- SafeUtil.verifyDigest (String data, int size, String digest)
- SafeUtil.verifyPasswordDigest (String password, String passworddigest)

Deprecated Methods in Java SDK

The following methods are deprecated in the CA EEM Java SDK:

- `SafeContext.authenticateWithCertificate(String, String)`
- `SafeUtil.buildDigest(String, int)`
- `SafeUtil.buildPasswordDigest(String)`
- `SafeSession.exportSession(String)`
- `SafeContext.fastAuthenticateWithCertificate(String, String)`
- `SafeContextFactory.getSafeContext(String, String, File, String, Locale)`
- `SafeContextFactory.getSafeContext(String, String, File, String, Locale, String)`
- `SafeContext.issueCertificate(String, String)`
- `SafeContext.issueCertificateForSession(SafeSession, String, String)`
- `SafeContext.issueCertificateForUser(SafeUser, String, String)`
- `SafeContext.registerApplicationInstance(SafeApplicationInstance, String, String)`
- `SafeGlobalUser.setDirectoryPassword(String)`
- `SafeSession.setLastPassword(String)`
- `SafeGlobalUser.setPassword(String)`
- `SafeGlobalUser.setPasswordDigest(String)`
- `SafeUtil.verifyDigest(String, int, String)`
- `SafeSession.verifyLastPassword(String)`
- `SafeUtil.verifyPasswordDigest(String, String)`

Deprecated APIs in C++ SDK

The following methods for certificate management are deprecated in the CA EEM C++ SDK:

- `Safe::Context::authenticateWithCertificate` (const char *certfile, const char *password, Safe::Error &ee)
- `Safe::Context::fastAuthenticateWithCertificate` (const char *certfile, const char *password, istring &username, Safe::Error &ee)
- `Safe::Context::issueCertificate` (const char *certfile, const char *password, Safe::Error &ee)
- `Safe::Context::issueCertificateForSession` (Safe::Session *session, const char *certfile, const char *password, Safe::Error &ee)
- `Safe::Context::issueCertificateForUser` (Safe::User *user, const char *certfile, const char *password, Safe::Error &ee)
- `Safe::Context::registerApplicationInstance` (Safe::ApplicationInstance &ai, const char *certfile, const char *password, Safe::Error &ee)
- `Safe::GlobalUser::setDirectoryPassword` (const char *password)
- `Safe::GlobalUser::setDirectoryPasswordDigest` (const char *passworddigest)
- Use `setPassword` member `Safe::GlobalUser::setPasswordDigest` (const char *passworddigest)

Changes to eiam.config File

New tags are added to the eiam.config file to support the following functionality:

- Configure CA EEM SDK in FIPS-only mode or non-FIPS mode.
- Enable iTechnology level logging in Java SDK, C++ SDK.
- Create SafeContext

Note: For more information about the eiam.config file, see the *Getting Started Guide*.

Changes to iPoz.conf File

The following new tags are added to the iPoz.conf file:

- `<ArtifactManager SessionTimeout="10" RequestTimeout="30"ArtifactStore="local/federated"></ArtifactManager>`
- `<ExternalDirCacheFolder>`
- `<ExternalDirEscapeSlash>`

Note: For more information about these tags, see the *Getting Started Guide*.

Changes to Safex XML

The following tags are added to the Safex XML to support certificates during application registration with CA EEM:

PEM certificates

```
<Register certtype="pem" certfile="RBC_Hospital.pem" keyfile="RBC_Hospital.key" password="RBC_Hospital">
```

Where

certfile

Specifies the name of the PEM certificate file.

keyfile

Specifies the private key file.

password

Specifies the password required to read the pem file. In FIPS-only mode, password tag must be blank.

P12 certificates

```
<Register certtype="p12" certfile="RBC_Hospital.p12" password="RBC_Hospital">
```

certfile

Specifies the name of the P12 file.

password

Specifies the password required to read the P12 file.

P11 certificates

```
<Register certtype="p11" pkcs11lib="pkcs11lib" token="token" userpin="userpin"
id="id" sensitive="true">
```

Where**pkcs11lib**

Specifies the path to the PKCS11 library implementation.

token

Specifies the hardware token name.

userpin

Specifies the user pin required to log in.

id

Specifies the certificate label.

sensitive

Specifies if the private key is treated as sensitive data or not. If the private key path is specified as sensitive, the private key cannot be copied.

Value: [True|False].

Issuing Certificates Using Safex

The following new tags are included with the Safex XML to issue certificates:

P12 certificate

```
<Register certtype="p12" certfile="sample.p12" password="sample"/>
```

PEM certificate

```
<Register certtype="pem" certfile="sample.pem" keyfile="sample.key"
password="sample">
```

Note: FIPS-only mode does not support passwords. In FIPS-only mode, the password must be empty.

P11 certificate

```
<Register certtype="p11" pkcs11lib="pkcs11lib" token="token" userpin="userpin"
id="id" sensitive="true">
```

Changes to Display of Filters in GUI

From this release, the attribute type shortcode is displayed in filter information in CA EEM GUI. The following example shows how filters are displayed in CA EEM admin GUI:

```
global user: gu:UserName == value: val:testuser
```

Before CA EEM r8.4 SP3, the same filter was displayed as follows:

```
global user: UserName == value: testuser
```

Changes to setBackend() API

Before CA EEM r8.4 SP3, the CA EEM SDK had to attach at least once to the primary server to retrieve a list of failover servers. If the primary server is down before the first attach, the CA EEM SDK does not retrieve the failover server list from the primary server. In CA EEM r8.4 SP3, you can set a list of failover servers in the CA EEM SDK using the `setBackend()` API. So, if the primary server is down before the first attach, the CA EEM SDK uses the list of hostnames provided using the `setBackend()` method and connects to the secondary server.

Note: This API is not valid for the CA EEM C# SDK. For more information about the `setBackend()` API, see the *Programming Guide with SDK Documentation*.

Case Sensitivity of Attributes during Policy Evaluation

During policy evaluation, CA EEM treats the attributes listed in the following table as case insensitive when evaluating attributes. If these attributes are provided as part of *calculations* or custom variables in filters, CA EEM treats them as case sensitive.

Attribute Type	Attribute	Comments
dug	Name	Name attribute of Dynamic User Group attribute type.
gu	UserName	User name attribute of Global User attribute type.
gu	GroupMembership	Group membership attribute of Global User attribute type.
gug	GroupMembership	Group membership attribute of Global User Group attribute type.
gug	Name	Name attribute of Global User Group attribute type.

Attribute Type	Attribute	Comments
req	identity	Identity attribute of Request attribute type.
req	delegator	Delegator attribute of Request attribute type.
u	GroupMembership	Group membership attribute of Application User attribute type.
u	Name	Name attribute of Application User attribute type.
ug	GroupMembership	Group membership attribute of Application User Group attribute type.
ug	Name	Name attribute of Application User Group attribute type.

Changes in CA EEM r8.4 SR02

The following topics explain the changes that were made to CA EEM r8.4 SR02 from CA EEM r8.4 SR01.

rotateLogFile API in CA EEM C++ SDK

The following API is deleted and is no longer available with the CA EEM C++ SDK:

```
Safe::Context::rotateLogFile
```

Constructors Deprecated from Java SDK

The following constructors are deprecated from the CA EEM Java SDK:

- SafeEvent()
- SafeEvent(java.lang.String xmlString)

The following new constructor is added to the SafeEvent() class in the CA EEM Java SDK:

- SafeEvent(com.ca.itechnology.iclient.Iclient)

Packaging of log4j

CA EEM Java SDK does not ship log4j-1.2.15.jar as a separate file. The log4j-1.2.15.jar file is embedded in the Safe.jar file.

Changes to Logger Configuration File

In CA EEM r8.4 SR01, you configured CA EEM SDK logging using the logger.config file. For this release, the logger.config file is replaced with two new files--eiam.log4cxx.config and eiam.log4j.config. These files control the logging configuration for CA EEM C++ SDK and CA EEM Java SDK respectively.

Note: Logging in CA EEM C# SDK is not upgraded. You must continue to use safe::util to log messages in CA EEM C# SDK.

Changes in CA EEM r8.4 SR01

The following topics explain the changes that were made to CA EEM r8.4 SR01 from CA EEM r8.4.

Changes to CA EEM SDK Logging

For Java and C++ SDKs, the new logging process in CA EEM utilizes the log4j and log4cxx as logger frameworks whereas the older logging process utilized a utility safe::util logger. This new feature gives you the following benefits:

- You need not run the debugger to trace the log level and restart the iGateway to debug the errors.
- You can manage the logging properties such as filename, file size, number of backup log files, and so on by editing the parameters in logger configuration file.
- You can log messages, information, or errors relating to network, performance, console, and CA EEM SDK.

Note: Logging in CA EEM C# SDK is not upgraded. You must continue to use safe::util to log messages in CA EEM C# SDK.

Changes in CA EEM r8.4

The following topics explain the changes that were made in CA EEM r8.4.

JRE Requirement for CA EEM Installation

In the current release of CA EEM, JRE is no longer a mandatory requirement to install or use CA EEM. A new server installation parameter `javahome` is added to CA EEM installation; if `javahome` is set to "none", the CA EEM installer lets you install CA EEM without any dependency on JRE.

Note: If you intend to integrate CA EEM with CA SiteMinder, JRE is a mandatory prerequisite for CA EEM installation.

Changes to Event Logging

In the previous releases of CA EEM, when you performed an administrative action such as inserting, removing, or modifying a `SafeStoredObject` or folder in the policy server store, an admin event was generated for each of the changed attributes. In this release of CA EEM, for an administrative action, all the attributes that are updated, inserted, or removed are logged as one admin event.

Also, in this release of CA EEM, events generated during authorization log the named attributes against which the authorization has been done. The following method is added to the `Safe::Context` class to implement this behavior:

```
void submitAuthorizationEvent(const char *identity, const char *action, const char
*resourcename, Safe::ErrorCode errorcode, const char *delegator, const char
*policyname, Safe::AttrQ &namedattrq);
```


Chapter 9: Fixed Issues List

Issues Fixed in CA EEM r8.4 SP3

The following STAR issues are fixed in this release:

STAR Issue Number	Description of the Issue
17699470	EiamAdmin cannot add trust between two CA EEM Servers.
17911242	Munged password is visible to non-root users.
18497993	Error in retrieving users if the user CN contains a comma.
18443601	CA EEM Server memory consumption increases gradually under load.
18460039	CA EEM Server cores during shutdown on AIX.
18492259	Localized strings are truncated in the CA EEM installer.
18497993	CA EEM is unable to retrieve users if the user CN contains forward slash.
18590200	CA EEM Server startup crashes if the calm.cnf file is empty.
18663809	log4j throws an exception during initialization.
18677992	FastAuthenticateWithPassword does not return the correct error code.
18709849	CA EEM Server CPU utilization is 100 percent.
18771592	CA EEM policy evaluation is case sensitive.
18790763	Applications hang during exit if they invoke CA EEM SDK through a wrapper DLL.
18958738	CA EEM installation fails when the temporary directory path contains blank space.

Issues Fixed in CA EEM r8.4 SR02

The following STAR issues are fixed in this release:

STAR Issue Number	Description of the STAR Issue
16654975	iGateway memory usage growth increases due to memory defragmentation used by Windows.

STAR Issue Number	Description of the STAR Issue
16843262	Policies that include /* in the resources field are not displayed in the GUI.
17605187	When retrieving users, if user first and last names have special characters such as '&', '<', '>', and so on, CA EEM Java SDK changes these special characters to their escape sequences.
17729293	When you create a policy of policy type, Identity Access Control List, CA EEM lets you assign different permissions to the same user.
18100525	Cannot login to applications that are protected by CA EEM if any of the CA EEM Servers in the failover setup are not available.
18100943	In a failover setup, when the CA EEM Server 1 is down, any policy changes you make in the replicated servers are saved, but the confirmation message is not displayed.
18119830	When you logout from CA EEM, CA EEM crashes.
18122029	CA EEM inserts an ampersand '&' to object search filters if AllUsersFilter is not used. This insertion increases the processing cycles to the LDAP server.
18167627	The maximum size of App Objects in CA EEM is only 2.5 MB.
18181773	The searchMatchingPoliciesByResource API in Java SDK does not accept '*' as input; so, the Java SDK performance is affected.
18205860	log4cxx messages that are displayed when registering or unregistering applications through safex must be recorded with relevant log messages in the log file.
18246763	When iGateway starts, it creates a defunct process.
18250914	CA EEM installation fails on a machine german language version of Windows.
18261887	During policy evaluation, CA EEM treats global users user name, application users name, global and application groups as case sensitive.
18318532	CA EEM inserts an ampersand '&' in filters in LDAP queries. This insertion increases the processing cycles to the LDAP server.
18320089	Some resource filters are not saved properly if the regular expressions for resources contain an escape character '\\'.
18358337	When the primary CA EEM Server recovers in a failover setup, applications protected by CA EEM have to be restarted to authenticate users.
18360263	CA EEM lets logged-in users to view home page in a different session without logging in.
18434870	In a CA EEM failover setup, application registration information is not replicated from the primary server to the secondary servers.
18443918	The version of log4j shipped with SAML must be the same as the version being used by Java SDK.
18451973	CA EEM SDK hangs when you use the Safe::Cache::Stop call.

Issues Fixed in CA EEM r8.4 SR01

The following issues are fixed in this release of CA EEM:

- Safex/safetool cannot allocate more than 900 MB on HP-UX.
- Admin Event reports are improperly displayed in CA ELM UI.
- Events of two servers in a failover setup is displayed in both the servers.
- Zero must be removed after the Build Number in the product version.
- CA Directory install fails if C drive does not exist on Windows.
- Default RetryHandler Count for HttpClientrequest should be configurable through a method.
- The method pingEiam that checks for the existence of CA EEM server should be included in JAVA and C# SDKs.
- C# Demo Application and elsewhere.cs must not be shipped with Linux/UNIX SDK builds.

The following STAR issues are fixed on this release of CA EEM:

STAR Issue	Description of the STAR Issue
17346171	On Windows platform, Data and Directory folders are not deleted from their location after you uninstall EEM.
17342835	When retrieving Global Users and Groups, CA EEM is unable to retrieve users with comma in their username.
17832874	A Microsoft Visual C++ 8 (VC8) solution file and VC8 project file is required to build the safetool binary using the SDK.
17844994	CA EEM SDK throws an exception if a policy has * as a resource.
16491014	CA EEM must support SiteMinder failover configuration when connecting to external directory servers.
17888426	DN name is not displayed in ObjectRemove logging statements.

Chapter 10: Known Issues

This section contains the following topics:

- [CA EEM Java Authentication API Takes 20 Seconds](#) (see page 42)
- [Error Messages are Displayed When iGateway Service is Started or Stopped](#) (see page 42)
- [SponsorHandler::loadSponsor Error Messages in igateway.log file](#) (see page 43)
- [SAML Authentication and CA SiteMinder Integration Do Not Work When the CA EEM Server is in FIPS-only Mode](#) (see page 43)
- [Cannot Log Into CA EEM Server with a Custom Created User EiamAdmin](#) (see page 43)
- [Delegation Policies](#) (see page 44)
- [Error in Custom Installation](#) (see page 44)
- [Error in CA EEM Server Installation](#) (see page 45)
- [Error Using CA EEM Java SDK](#) (see page 45)
- [Error Using Kerberos Authentication](#) (see page 46)
- [Error Using WebLogic 8.1 Application Server](#) (see page 46)
- [Error Using XACML and SPML Services](#) (see page 47)
- [Export Application Takes Time](#) (see page 47)
- [Unable to Launch CA EEM GUI After Uninstalling CA Audit](#) (see page 48)
- [Unable to Launch CA EEM GUI After Installing CA Integrated Threat Management](#) (see page 48)
- [Unable to Launch CA EEM GUI After Uninstalling CA Integrated Threat Management](#) (see page 49)
- [Custom Reports Fails to Load or Takes a Long Time to Load](#) (see page 50)
- [Application Data is Missing After Connecting to CA SiteMinder](#) (see page 51)
- [Search for Users or Groups When Connected to CA SiteMinder Takes a Long Time to Complete](#) (see page 51)
- [SAML Does Not Work After Upgrading From r8.2.1 to the Current Release](#) (see page 52)
- [Event Log Settings Not Displayed](#) (see page 52)
- [Global Group Memberships Are Not Displayed Correctly for Custom Mapped Sun One Directory](#) (see page 53)
- [Archive Query Fails](#) (see page 53)
- [Archive Query Results Are Not Refreshed](#) (see page 53)
- [Storage Folder Field Under Event Log Settings](#) (see page 53)
- [Memory Size on HP-UX](#) (see page 54)
- [Authentication to an SSL Enabled Directory over Non-SSL Port Fails](#) (see page 54)

CA EEM Java Authentication API Takes 20 Seconds

Valid on Linux

Symptom:

When I use BSAFE Crypto-J 4.0 as a JCE provider, the CA EEM authentication API takes 20 seconds to execute.

Solution:

This is an issue with Sun Java. The workaround for this issue is published on the following Sun site: <http://bugs.sun.com/>. Search for the bug ID: 4705093 to see the workaround. Follow the steps as a workaround:

- Set the EGD used by Java by setting the security property "java.security.egd" to "file:///dev/urandom"

or

- Set the system property, rather than the security property, "java.security.egd" from the command line as follows: `-Djava.security.egd=file:///dev/./urandom`

Error Messages are Displayed When iGateway Service is Started or Stopped

The following error messages are recorded in the `igateway.log` file when you shut down iGateway:

- `PozFactory::isFailoverRequired: Could not communicate with the EEM Server, server returned with errorcode= 500`
- `PozFactory::attachPoz Error: iSponsor server error`
- `PozFactory::searchObjects - Not Attached`
- `Safe::Cache::threadLoop - error retrieving cache objects`

Ignore these messages; they have no impact on the CA EEM functionality.

Also, when you start or stop iGateway on Windows, you see the following error messages in the Event Viewer:

- `ERROR: iGateway service failed to start. Error code is 2 return code is 0`
- `ERROR: iGateway service failed to stop. Error code is 2 return code is 0`

These messages are displayed when your computer is slow and fails to stop or start the iGateway services within a specified time limit. Ignore these messages, they have no impact on the CA EEM functionality.

SponsorHandler::loadSponsor Error Messages in igateway.log file

The following error messages are recorded in the igateway.log file when you upgrade CA EEM Server from r8.4 SR01 or r8.4 SR02 to the current version of the CA EEM Server:

- ERROR :: SponsorCallBack::GetLibPtr2 : unable to load library [CALMSpindle]
- ERROR :: SponsorHandler::loadSponsor : unable to load [sponsor : logDepot , imagename : logDepot]
- ERROR :: SponsorHandler::start : unable to load sponsor [sponsor : logDepot , imagename: logDepot]
- ERROR :: InProcessSponsorManager::addSponsor : unable to load sponsor [sponsor : logdepot]
- ERROR :: SponsorManager::start : Sponsor [logdepot] failed to load

Ignore these error messages; they have no impact on the CA EEM functionality.

SAML Authentication and CA SiteMinder Integration Do Not Work When the CA EEM Server is in FIPS-only Mode

Valid on AIX

SAML authentication and CA SiteMinder integration fails when CA EEM Server is configured for FIPS-only mode.

Cannot Log Into CA EEM Server with a Custom Created User EiamAdmin

Valid on Windows and Linux

Symptom:

I cannot log into CA EEM server with a custom created user "EiamAdmin". I receive an incorrect password error message.

Solution:

By default, CA EEM creates a user 'EiamAdmin' with administrative privileges during installation. When you try to login as "EiamAdmin", CA EEM always tries to authenticate based on the credentials of the default "EiamAdmin" user. Therefore, if you have a custom user "EiamAdmin" in your external directory or CA MDB, you cannot log into CA EEM with the custom "EiamAdmin" credentials.

Delegation Policies

Symptom:

When I delete or disable users who have delegated permissions (using delegation policies) to other users, I find that the delegated permissions remain effective.

Solution:

You must explicitly delete the delegation policies created by the deleted or disabled user.

Error in Custom Installation

Valid on Windows

Symptom:

When I install CA Directory and iTechnology in a customized location, I receive the following error:

```
Error Executing Specified program
```

Solution:

You may receive this error due to the restriction on the InstallShield command length.

On a computer with Microsoft Windows XP or Windows Server 2003, the maximum length of the string that you can use at the command prompt is 8,191 characters. With Microsoft Windows 2000, the maximum length of the string that you can use at the command prompt is 2,047 characters.

To avoid this error, use the cmdfile parameter:

```
EEMServer_[releasenumbr].[builddate]_win32.exe -s -a /s /f1"location of response file" /z"cmdfile=location of cmdfile "
```

Example:

```
EEMServer_8.4.0.55_win32.exe -s -a /s /f1"c:\resp.iss" /z"cmdfile=c:\cmd.txt "
```

Important! For the cmdfile parameter, enter a single space character only before the end quotes.

The cmdfile contains the custom installation paths for CA Directory and iGateway as shown in the following example:

```
etdirpath=Custom installation path for CA Directory;igpath=Custom installation path for iGateway;
```

Error in CA EEM Server Installation

Valid on HP-UX

Symptom:

When I Install CA EEM Server, I receive a message 'One or more installation sanity tests failed' and the installation fails.

Solution:

You receive this error if the swlist binary file is not accessible. The swlist binary file is used to check for HP-UX patches.

To avoid this, update the PATH environment variable with the folder containing the swlist binary file using the export command. For example:

```
export PATH=/usr/sbin/:$PATH
```

After updating the path, restart the installation.

Error Using CA EEM Java SDK

Symptom:

When I use the CA EEM Java SDK on a computer with Tomcat 4.1, I receive the following browser error:

HTTP 404 Error

In the Tomcat log, I see the following exception:

```
org.apache.commons.logging.LogConfigurationException: Invalid class loader hierarchy. You have more than one version of 'org.apache.commons.logging.Log' visible, which is not allowed.
```

Solution:

To use the CA EEM Java SDK on a computer with Tomcat 4.1, do the following:

1. Stop Tomcat Server.
2. Delete the commons-logging-api.jar and commons-logging.jar files from the webapps/application_name/WEB-INF/lib/ directory.
3. Restart Tomcat Server.

Error Using Kerberos Authentication

Valid on SUSE Linux 9

Symptom:

When I perform Kerberos authentication, I receive an "EE_Authentication" error.

Solution:

Enable trace in the CA EEM to capture the details of the error in the iPoz log file. If you receive the error message 'libkrb5.so file does not exist' in the iPoz.log file, create a link from the existing libkrb5.so.* file to the libkrb5.so file.

You receive this error if the authentication process is unable to locate the libkrb5.so file in the LD_LIBRARY_PATH.

Note: The iPoz.log file logs the error only if you enable trace on CA EEM. For information on how to enable tracing, see the *Programming Guide*.

Example: Create a link

The following example searches for the available version of libkrb5.so file and creates a link:

```
# find / -name libkrb5.so.*  
/usr/lib/libkrb5.so.17.3.0  
# ln -s /usr/lib/libkrb5.so.17.3.0 /usr/lib/libkrb5.so
```

Error Using WebLogic 8.1 Application Server

Symptom:

When I deploy an application that uses the CA EEM Java SDK, on a WebLogic 8.1 Application server, I receive a ClassCastException.

Solution:

You receive this error if the WebLogic server is configured to use its own implementation of HttpURLConnection for HTTP handlers.

To avoid this error, configure the WebLogic server to use the SUN handlers by adding the -DUseSunHttpHandler=true parameter to the JVM options.

For information on how to set the parameters, see the JVM documentation.

Error Using XACML and SPML Services

Symptom:

When I use XACML and SPML services with JRE1.5 installed, I receive the following error:

```
java.lang.NullPointerException
```

Solution:

To use XACML and SPML services with JRE1.5, do the following:

1. Stop Tomcat Server.
2. Copy the xercesImpl.jar file from the WEB-INF/lib directory of oasis.war to the jre/lib/ext directory.
3. Start Tomcat server.

For more information about this issue, see

http://bugs.sun.com/bugdatabase/view_bug.do?bug_id=6219364.

Export Application Takes Time

Valid on Linux**Symptom:**

The Export Application feature takes a long time to export an application.

Solution:

To optimize the time taken to export an application, do the following:

1. Stop iGateway.
2. Open the /opt/CA/SharedComponents/iTechnology/ directory.
3. Edit the S99gateway script file as follows:
 - Modify the following entry:

```
LD_ASSUME_KERNEL=2.4.1
```
 - To read:

```
# LD_ASSUME_KERNEL=2.4.1
```
4. Start iGateway.

Unable to Launch CA EEM GUI After Uninstalling CA Audit

Symptom:

I am unable to launch CA EEM GUI after uninstalling CA Audit that is installed on the same server as CA EEM.

Solution:

You may be unable to launch CA EEM GUI if there are any references to CA Audit spindles in the Spin.conf files even after uninstalling CA Audit. You must delete all CA Audit related spindles from the Spin.conf to launch CA EEM GUI.

Unable to Launch CA EEM GUI After Installing CA Integrated Threat Management

Valid on Windows Server 2003 SP2

Symptom:

I am unable to launch CA EEM GUI after installing CA Integrated Threat Management on the same server as CA EEM.

Solution:

You may be unable to launch CA EEM GUI because CA Integrated Threat Management during installation removes a <Spindle> tag from the Spin.conf file.

You must add the <Spindle> tag before the following section in the Spin.conf file to launch CA EEM GUI:

```
<version>8.1</version>  
<directory/>  
<config/>  
<redirecthttps>true</redirecthttps>  
<sendevents>true</sendevents>  
</Spindle>
```

To look like:

```
<Spindle>  
<version>8.1</version>  
<directory/>  
<config/>  
<redirecthttps>true</redirecthttps>  
<sendevents>true</sendevents>  
</Spindle>
```

Unable to Launch CA EEM GUI After Uninstalling CA Integrated Threat Management

Valid on Windows Server 2003 SP2

Symptom:

I am unable to launch CA EEM GUI after uninstalling CA Integrated Threat Management that is installed on the same server as CA EEM.

Solution:

You may be unable to launch CA EEM GUI because CA Integrated Threat Management during uninstallation removes a <Spindle> tag from the Spin.conf file.

You must add the <Spindle> tag before the following section in the Spin.conf file to launch CA EEM GUI:

```
<version>8.1</version>  
<directory/>  
<config/>  
<redirecthttps>>true</redirecthttps>  
<sendevents>>true</sendevents>  
</Spindle>
```

To look like:

```
<Spindle>  
<version>8.1</version>  
<directory/>  
<config/>  
<redirecthttps>>true</redirecthttps>  
<sendevents>>true</sendevents>  
</Spindle>
```

Custom Reports Fails to Load or Takes a Long Time to Load

Symptom:

When I create a custom report and later try to view the custom report, it fails to load or takes 10 to 15 minutes or longer to load.

Solution:

You must restart the igateway service to load the custom report.

Note: For more information on how to start and stop iGateway services, see the *Getting Started Guide*.

Application Data is Missing After Connecting to CA SiteMinder

Valid on SUSE Linux 9.0

Symptom:

When I attach my application having more than 30,000 policies to CA EEM server and try to connect to CA SiteMinder, I receive the following error and I lose my application data:

```
EE_NOTALLOWED
```

Solution:

You may receive this error due to low JVM memory. To increase JVM memory, you must use the ConfigTool.exe to add the following lines of code to the igateway.conf file:

```
<JVMSettings>
    <loadjvm>true</loadjvm>
<!-- Increasing the jvm heap memory -->
    <Properties name="test">
        <jvm-property>-Xmx256M</jvm-property>
    </Properties>
</JVMSettings>
```

To add the preceding code, open the iTechnology folder and run the ConfigTool.exe as follows:

```
./ConfigTool.exe -merge -comp igateway -xml "<JVMSettings><Properties
name=\"MaxJVMHeap\"><jvm-property>-Xmx[memory_size]</jvm-property></Properties></
JVMSettings>"
```

Where

[memory_size]

Specifies the memory that the JVM uses. You must set this value based on your requirements.

Search for Users or Groups When Connected to CA SiteMinder Takes a Long Time to Complete

When you use a regular expression * (asterisk) to search for users or groups through CA SiteMinder, CA EEM may take 20 minutes to 45 minutes, based on your system configuration, to display the results.

SAML Does Not Work After Upgrading From r8.2.1 to the Current Release

Symptom:

SAML does not work after I upgrade from CA EEM r8.2.1.

Solution:

You must perform the following steps to ensure that SAML works after upgrade:

1. Delete the following files from the iTechnology folder:
 - jaxp-api.jar
 - dom.jar
2. Restart iGateway

Event Log Settings Not Displayed

Symptom:

I am unable to view the Event Log Settings page when I do the following steps:

1. Click any other option in CA EEM server to navigate to another page from the Event Log Settings page.
2. Click Event Log Settings.

Solution:

If you have navigated away from the Event Log Settings page and want to go back to the same page, click Manage Reports, Configuration, Services, Event Log Settings.

Global Group Memberships Are Not Displayed Correctly for Custom Mapped Sun One Directory

When you connect to a custom mapped Sun One directory, the global group memberships may not be displayed correctly. When you connect to a custom mapped Sun One directory, the global group membership is determined by the following parameters under custom mapping:

Use Group As Container

If you select this option, CA EEM will display only the group membership of the user. The extended group membership of the user and the group membership of the groups is not displayed.

Use Group As Attribute

If you select this option with Group Membership Attribute as `uniqueMember`, CA EEM will display group memberships of the groups, but CA EEM will not display the group membership of the user.

Archive Query Fails

Valid on Red Hat Linux Enterprise Server

When you append a blank space at the end of your search query, the archive query fails and CA EEM will not display any query results.

Archive Query Results Are Not Refreshed

When your archive query fails, CA EEM displays the appropriate error message, but the Archive Query Results pane may not be refreshed; the Archive Query Results pane may display the results from an earlier archive query.

Storage Folder Field Under Event Log Settings

This release of CA EEM does not support Storage Folder parameter in Event Log Settings, though the Storage Folder field is visible in CA EEM server.

Note: For more information about Event Log Settings, see the *Online Help*.

Memory Size on HP-UX

By default, HP-UX allocates 256 MB of memory for processes such as iGateway. CA EEM will run out of memory and iGateway may crash if you perform tasks using CA EEM that may require memory of more than 256 MB. So, you must increase the memory size allocated by HP-UX to iGateway process based on your requirement.

Authentication to an SSL Enabled Directory over Non-SSL Port Fails

Symptom:

When I disable SSL connections to an external directory and later try connecting to that external directory using SSL port 636, the authentication fails, and I am unable to login to CA EEM GUI.

Solution:

You cannot use an SSL port to connect to an external directory even if the SSL connection is disabled. To connect to an external directory that is configured for SSL connections, over non-SSL ports, you must do the following:

1. Open iPoz.conf file and edit the following entry to reflect any valid non-SSL port:

```
<ExternalDirPort>non-SSL port</ExternalDirPort>
```

2. Restart iGateway

You can now connect to an SSL enabled external directory over non-SSL ports. The authentication is successful and you can login to CA EEM GUI.

Chapter 11: Limitations

This section contains the following topics:

[CA Integrated Threat Management r8.0](#) (see page 55)

[Display Limitations in User Interface](#) (see page 55)

[CA EEM Server Operating System Requirements for Kerberos Authentication](#) (see page 56)

[CA EEM SiteMinder Integration](#) (see page 56)

[Policy Limitation on HP-UX](#) (see page 56)

CA Integrated Threat Management r8.0

CA EEM is incompatible with CA Integrated Threat Management r8.0. Therefore, if you need to run the CA EEM Server on the same computer as the CA Integrated Threat Management product, you must upgrade your computer to CA Integrated Threat Management r8.1.

Display Limitations in User Interface

The use of non-alphanumeric characters, such as double quotes, \ or / cause display problems in the user interface. Use only alphanumeric characters for the following objects:

- Actions
- Calendars
- Custom Mapped Directory Label
- Global Groups
- Global Users
- Folders
- Named Attributes
- Obligation Names
- Policies
- Resource Classes
- Users
- User Attributes
- User Groups

CA EEM Server Operating System Requirements for Kerberos Authentication

For Kerberos authentication from any CA EEM-supported client, the CA EEM Server must be installed on any of the following operating systems:

- AIX 5.3 with krb.client packages installed
- Red Hat Enterprise Linux 4 or 5
- Solaris 10 with kernel patch level 120011-14 or later

Important! CA EEM does not support Kerberos authentication on the HP-UX platform.

CA EEM SiteMinder Integration

CA EEM does not support integration with CA SiteMinder on the following platforms:

- HP-UX
- SUSE Linux

Policy Limitation on HP-UX

CA EEM supports up to 20,000 policies on the HP-UX platform.

Chapter 12: Published Fixes

The complete list of published bug fixes for this product can be found through Published Solutions on CA Support Online.

Chapter 13: Bookshelf

The Bookshelf provides access to all CA EEM documentation from a central location. The Bookshelf includes the following:

- Single expandable list of contents for all guides in HTML format
- Full text search across all guides with search terms highlighted in the content and ranked search results
- Breadcrumbs that link you to higher level topics
- Single index across all guides
- Links to PDF versions of guides for printing

Viewing the Bookshelf requires Internet Explorer 6 or 7 or Mozilla Firefox 2. For bookshelf links to PDF guides you can print, Adobe Reader 7 or 8 is required. You can download a supported version of Adobe Reader at www.adobe.com.

The PDF guides for this product are as follows:

- Getting Started
- Programming Guide
- Release Notes

To use the Bookshelf

1. Locate and open the documentation folder from the product installation folder.
2. Choose one of the following methods to open the bookshelf:
 - Open the Bookshelf.hta file if the bookshelf is on the local system and you are using Internet Explorer.
 - Open the Bookshelf.html file if the bookshelf is on a remote system or if you are using Mozilla Firefox.

Chapter 14: International Support

An *internationalized* product is an English product that runs correctly on local language versions of the required operating system and required third-party products, and supports local language data for input and output. Internationalized products also support the ability to specify local language conventions for date, time, currency and number formats.

A *translated* product (sometimes referred to as a *localized* product) is an internationalized product that includes local language support for the product's user interface, online help and other documentation, as well as local language default settings for date, time, currency, and number formats.

Note: The CA EEM SDK is neither localized nor translated.

In addition to the English release of this product, CA supports *only* those languages listed in the following table.

Language	Internationalized	Translated
Brazilian-Portuguese	Yes	No
Chinese (Simplified)	Yes	No
Chinese (Traditional)	Yes	No
French	Yes	No
German	Yes	No
Italian	Yes	No
Japanese	Yes	No
Korean	Yes	No
Spanish	Yes	No

Appendix A: Third-Party License Agreements

CA EEM uses some third-party code. This appendix includes the license agreements for that code.

This section contains the following topics:

[Softwares Under the Apache License](#) (see page 64)
[Adaptive Communication Environment \(ACE\) 5.5.10](#) (see page 68)
[Adobe Flex SDK 3.4](#) (see page 70)
[Castor 0.9.5.4](#) (see page 76)
[Expat 2.0.1](#) (see page 77)
[libcurl 7.18.2](#) (see page 78)
[Libxml2 2.6.27](#) (see page 79)
[Libxslt 1.1.18](#) (see page 80)
[Microsoft Cabinet File Software Development Kit \(CAB SDK\) 1](#) (see page 82)
[MIT Kerberos v5 release1.4](#) (see page 83)
[NUNIT 2.2.8](#) (see page 86)
[Aleksey XML Security Library v.1.2.9 and the xmlsec-nss Library](#) (see page 87)
[OpenSSL 0.9.8.d and 0.9.8.h](#) (see page 100)
[OpenLDAP 2.4 and 2.3.20](#) (see page 103)
[PCRE 6.3](#) (see page 104)
[zlib 1.2.3](#) (see page 106)
[ZThread 2.3.2](#) (see page 106)

Softwares Under the Apache License

Portions of this product include software developed by the Apache Software Foundation (<http://www.apache.org/>).

- Axis 1.1
- Commons Codec 1.3
- Commons Logging 1.1.1
- httpclient 4.0
- Log4cplus 1.0.2
- Log4cxx 0.10.0
- Log4j 1.2.15
- Log4net 1.2.10
- not-yet-commons-ssl 0.3.10
- OpenSAML 1.1
- Xalan-J 2.5.2
- Xerces-C 2.6.0
- Xerces-C 2.8
- Xerces-J 2.9.1
- XML Security Java 1.3

The Apache software is distributed in accordance with the following license agreement:

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 versions 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

Adaptive Communication Environment (ACE) 5.5.10

Copyright and Licensing Information for ACE(TM), TAO(TM), and CIAO(TM).

ACE(TM), TAO(TM) and CIAO(TM) are copyrighted by Douglas C. Schmidt and his research group at Washington University, University of California, Irvine, and Vanderbilt University Copyright (c) 1993-2003, all rights reserved. The Douglas C. Schmidt software is distributed in accordance with the following license agreement. Since ACE TAO CIAO are open-source, free software, you are free to use, modify, copy, and distribute--perpetually and irrevocably--the ACE TAO CIAO 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 code built using ACE TAO CIAO.

You can use ACE TAO CIAO in proprietary software and are under no obligation to redistribute any of your source code that is built using ACE TAO CIAO. Note, however, that you may not do anything to the ACE TAO CIAO code, such as copyrighting it yourself or claiming authorship of the ACE TAO CIAO code, that will prevent ACE TAO CIAO from being distributed freely using an open-source development model. You needn't inform anyone that you're using ACE TAO CIAO in your software, though we encourage you to let us know so we can promote your project in the ACE TAO CIAO success stories.

ACE TAO CIAO are 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. Moreover, ACE TAO CIAO are 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 provide commercial support for ACE and TAO, however. ACE, TAO and CIAO are Y2K-compliant, as long as the underlying OS platform is Y2K-compliant.

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 ACE TAO CIAO 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.

The ACE, TAO and CIAO web sites are maintained by the Center for Distributed Object Computing of Washington University for the development of open-source software as part of the open-source software community. By submitting comments, suggestions, code, code snippets, techniques (including that of usage), and algorithms, submitters acknowledge that they have the right to do so, that any such submissions are given freely and unreservedly, and that they waive any claims to copyright or ownership. In addition, submitters acknowledge that any such submission might become part of the copyright maintained on the overall body of code, which comprises the ACE, TAO and CIAO software. By making a submission, submitter agree to these terms. Furthermore, submitters acknowledge that the incorporation or modification of such submissions is entirely at the discretion of the moderators of the open-source ACE TAO CIAO projects or their designees.

The names ACE(TM), TAO(TM), CIAO(TM), 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. Further, products or services derived from this source may not be called ACE(TM), TAO(TM), or CIAO(TM) nor may the name Washington University, UC Irvine, or Vanderbilt University appear in their names, without express written permission from Washington University, UC Irvine, and Vanderbilt University.

If you have any suggestions, additions, comments, or questions, please let me know (email: d.schmidt@vanderbilt.edu).

Douglas C. Schmidt

Adobe Flex SDK 3.4

This CA product contains the above software, the use of which is governed by the following additional terms:

1. If Licensee requires any additional Adobe software in order to use the CA Product (i) Licensee shall obtain a valid license for such software from Adobe, and (ii) the use of which will be governed by end user license agreement that ships with such Adobe software;
2. Adobe disclaims all warranties and representations with respect to the CA Product; and
3. Adobe disclaims all liability with regard to Licensee's use of the CA Product and any Adobe software included therewith.

Additional Legal Notices:

© 2004-2006 Adobe Macromedia LLC Software and its Licensors. All rights reserved.

© 2004-2006 Adobe Systems Incorporated and its Licensors. All rights reserved.

The contents of this file are subject to the Netscape Public License Version 1.1 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.mozilla.org/NPL/>

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The Original Code is Mozilla Communicator client code, released March 31, 1998.

The Initial Developer of the Original Code is Netscape Communications Corporation. Portions created by Netscape are Copyright (C) 1998-1999 Netscape Communications Corporation. All Rights Reserved.

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.

Pool.c_Copyright 1987 - NeXT, Inc. and Graphics.c_Copyright 1988 NeXT, Inc. as an unpublished work. All Rights Reserved.

Portions of this code are licensed from Apple Computer, Inc. under the terms of the Apple Public Source License, Version 1.1. The source code version of these portions and the license are available at <http://www.opensource.apple.com/apsl/>.

ICU4J license - ICU4J 1.3.1 and later
COPYRIGHT AND PERMISSION NOTICE
Copyright (c) 1995-2001 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.

libwww Copyright Notice
libwww: W3C's implementation of HTTP can be found at:
<http://www.w3.org/Library/>
Copyright © 1994-2000 World Wide Web Consortium, (Massachusetts Institute of Technology, Institut National de Recherche en Informatique et en Automatique, Keio University). All Rights Reserved. This program is distributed under the W3C's Software Intellectual Property License. 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 W3C License <http://www.w3.org/Consortium/Legal/> for more details.
Copyright © 1995 CERN. "This product includes computer software created and made available by CERN. This acknowledgment shall be mentioned in full in any product

which includes the CERN computer software included herein or parts thereof.

Copyright 1995 by: Massachusetts Institute of Technology (MIT), CERN
This W3C software is being provided by the copyright holders under the following license. By obtaining, using and/or copying this software, you agree that you have read, understood, and will comply with the following terms and conditions:

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee or royalty is hereby granted, provided that the full text of this NOTICE appears on ALL copies of the software and documentation or portions thereof, including modifications, that you make.

THIS SOFTWARE IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED. BY WAY OF EXAMPLE, BUT NOT LIMITATION, COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE OR DOCUMENTATION WILL NOT INFRINGE ANY THIRD PARTY PATENTS, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS. COPYRIGHT HOLDERS WILL BEAR NO LIABILITY FOR ANY USE OF THIS SOFTWARE OR DOCUMENTATION.

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

W3C SOFTWARE NOTICE AND LICENSE
<http://www.w3.org/Consortium/Legal/2002/copyright-software-20021231>

This work (and included software, documentation such as READMEs, or other related items) is being provided by the copyright holders under the following license. By obtaining, using and/or copying this work, you (the licensee) agree that you have read, understood, and will comply with the following terms and conditions.

Permission to copy, modify, and distribute this software and its documentation, with or without modification, for any purpose and without fee or royalty is hereby granted, provided that you include the following on ALL copies of the software and documentation or portions thereof, including modifications:

1. The full text of this NOTICE in a location viewable to users of the redistributed or derivative work.
2. Any pre-existing intellectual property disclaimers, notices, or terms and conditions. If none exist, the W3C Software Short Notice should be included (hypertext is preferred, text is permitted) within the body of any redistributed or derivative code.
3. Notice of any changes or modifications to the files, including the date changes were made. (We recommend you provide URIs to the location from which the code is derived.)

THIS SOFTWARE AND DOCUMENTATION IS PROVIDED "AS IS," AND COPYRIGHT HOLDERS MAKE NO REPRESENTATIONS OR WARRANTIES, EXPRESS OR IMPLIED,

INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR THAT THE USE OF THE SOFTWARE OR DOCUMENTATION WILL NOT INFRINGE ANY THIRD PARTY PATENTS, COPYRIGHTS, TRADEMARKS OR OTHER RIGHTS.

COPYRIGHT HOLDERS WILL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY USE OF THE SOFTWARE OR DOCUMENTATION.

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

This formulation of W3C's notice and license became active on December 31 2002. This version removes the copyright ownership notice such that this license can be used with materials other than those owned by the W3C, reflects that ERCIM is now a host of the W3C, includes references to this specific dated version of the license, and removes the ambiguous grant of "use". Otherwise, this version is the same as the previous version and is written so as to preserve the Free Software Foundation's assessment of GPL compatibility and OSI's certification under the Open Source Definition. Please see our Copyright FAQ for common questions about using materials from our site, including specific terms and conditions for packages like libwww, Amaya, and Jigsaw. Other questions about this notice can be directed to site-policy@w3.org.

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. Calling this script `install-sh` is preferred over `install.sh`, to prevent `make`'s implicit rules from creating a file called `install` from it when there is no `Makefile`. This script is compatible with the BSD `install` script, but was written from scratch. It can only install one file at a time, a restriction shared with many OS's `install` programs.

Copyright 1990, 1998 The Open Group
Copyright (c) 2000 The XFree86 Project, Inc.

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.

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 OPEN GROUP 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.

Except as contained in this notice, the name of The Open Group shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from The Open Group.

This product includes software that is Copyright (c) 2005, Mitsubishi Electric Research Laboratory Inc., All Rights Reserved.

AltiVec technology is used with the permission of Motorola, Inc.

Speech compression and decompression technology licensed by Nellymoser, Inc. (<http://www.nellymoser.com>)

MPEG Layer-3 audio compression technology licensed by Fraunhofer IIS and THOMSON multimedia (<http://www.iis.fhg.de/amm/>)

ADPCM speech compression algorithm is used with the permission of Sun Microsystems, Inc.

Copyright 1991 by Andreas Stolcke
Copyright 1990 by Solbourne Computer Inc.
Longmont, Colorado
All Rights Reserved

Permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of Solbourne not be used in advertising in publicity pertaining to distribution of the software without specific, written prior permission.

ANDREAS STOLCKE AND SOLBOURNE COMPUTER INC. DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL ANDREAS STOLCKE OR SOLBOURNE 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.

Portions of this code are licensed from Catharon Productions, Inc.

Portions Copyright © 2001 artofcode LLC.
Portions Copyright © 1996, 2001 Artifex Software Inc.
This software is based in part on the work of the Independent JPEG Group.
Portions Copyright © 1998 Soft Horizons.
Portions Copyright © 2001 URW++.
All Rights Reserved.

Castor 0.9.5.4

Portions of this product include software provided by Intalio, Inc. and is distributed in accordance with the following license agreement.

Exolab; Intalio Inc.

Copyright 1999-2003 (C) Intalio Inc. 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 "ExoLab" must not be used to endorse or promote products derived from this Software without prior written permission of Intalio Inc. For written permission, please contact info@exolab.org.
4. Products derived from this Software may not be called "Castor" nor may "Castor" appear in their names without prior written permission of Intalio Inc. Exolab, Castor and Intalio are trademarks of Intalio Inc.
5. Due credit should be given to the ExoLab Project

(<http://www.exolab.org/>).

THIS SOFTWARE IS PROVIDED BY INTALIO 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 INTALIO 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.

Expat 2.0.1

'Portions of this product include software developed by the Thai Open Source Software Center Ltd. The EXPAT software is distributed in accordance with the following license agreement.'

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

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.

libcurl 7.18.2

This product includes libcurl 7.18.2, the use of which is governed by the following terms:

COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1996 - 2008, Daniel Stenberg, .

All rights reserved.

Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

THE SOFTWARE IS PROVIDED "AS IS", 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 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.

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.

Libxml2 2.6.27

Portions of this product include software developed by the Daniel Veillard. The libxml2 software is distributed in accordance with the following license agreement.

Copyright (C) 1998-2002 Daniel Veillard. 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 DANIEL VEILLARD 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.

Except as contained in this notice, the name of Daniel Veillard shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

Libxslt 1.1.18

Portions of this product include software developed by Daniel Veillard, Bjorn Reese and Daniel Stenberg. The Libxslt software is distributed in accordance with the following license agreement.

Copyright (C) 1998-2002 Daniel Veillard. 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 DANIEL VEILLARD 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.

Except as contained in this notice, the name of Daniel Veillard shall not

be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

* Copyright (C) 2000 Bjorn Reese and Daniel Veillard.

*

* Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

*

* THIS SOFTWARE IS PROVIDED ``AS IS|&"&| AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.

* Copyright (C) 2000 Gary Pennington and Daniel Veillard.

*

* Permission to use, copy, modify, and distribute this software for any purpose with or without fee is hereby granted, provided that the above copyright notice and this permission notice appear in all copies.

*

* THIS SOFTWARE IS PROVIDED ``AS IS|&"&| AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.

*

* Copyright (C) 1998 Bjorn Reese and Daniel Stenberg.

*

* Permission to use, copy, modify, and distribute this software for any
* purpose with or without fee is hereby granted, provided that the above
* copyright notice and this permission notice appear in all copies.

*

* THIS SOFTWARE IS PROVIDED ``AS IS|&"&| AND WITHOUT ANY EXPRESS OR IMPLIED
* WARRANTIES, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF
* MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE AUTHORS AND
* CONTRIBUTORS ACCEPT NO RESPONSIBILITY IN ANY CONCEIVABLE MANNER.

Microsoft Cabinet File Software Development Kit (CAB SDK) 1

This product contains a copy of the Microsoft Cabinet (CAB) File Software SDK. All title, rights and interests therein is retained by Microsoft Corporation.

MIT Kerberos v5 release1.4

Portions of this product include software developed by the Kerberos Contributors. The MIT Kerberos software is distributed in accordance with the following license agreement.

Copyright (c) 1985-2005 by the Massachusetts Institute of Technology.

All rights reserved.

Export of this software from the United States of America may require a specific license from the United States Government. It is the responsibility of any person or organization contemplating export to obtain such a license before exporting.

WITHIN THAT CONSTRAINT, permission to use, copy, modify, and distribute this software and its documentation for any purpose and without fee is hereby granted, provided that the above copyright notice appear in all copies and that both that copyright notice and this permission notice appear in supporting documentation, and that the name of M.I.T. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Furthermore if you modify this software you must label your software as modified software and not distribute it in such a fashion that it might be confused with the original MIT software. 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.

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

Individual source code files are copyright MIT, Cygnus Support, OpenVision, Oracle, Sun Soft, FundsXpress, and others.

Project Athena, Athena, Athena MUSE, Discuss, Hesiod, Kerberos, Moira, and Zephyr are trademarks of the Massachusetts Institute of Technology (MIT). No commercial use of these trademarks may be made without prior written permission of MIT.

"Commercial use" means use of a name in a product or other for-profit manner. It does NOT prevent a commercial firm from referring to the MIT trademarks in order to convey information (although in doing so, recognition of their trademark status should be given).

The following copyright and permission notice applies to the OpenVision Kerberos Administration system located in kadmin/create, kadmin/dbutil, kadmin/passwd, kadmin/server, lib/kadm5, and portions of lib/rpc:

Copyright, OpenVision Technologies, Inc., 1996,

All Rights Reserved.

WARNING: Retrieving the OpenVision Kerberos Administration system source code, as described below, indicates your acceptance of the following terms. If you do not agree to the following terms, do not retrieve the OpenVision Kerberos administration system.

You may freely use and distribute the Source Code and Object Code compiled from it, with or without modification, but this Source Code is provided to you "AS IS" EXCLUSIVE OF ANY WARRANTY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED. IN NO EVENT WILL OPENVISION HAVE ANY LIABILITY FOR ANY LOST PROFITS, LOSS OF DATA OR COSTS OF PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES, OR FOR ANY SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES ARISING OUT OF THIS AGREEMENT, INCLUDING, WITHOUT LIMITATION, THOSE RESULTING FROM THE USE OF THE SOURCE CODE, OR THE FAILURE OF THE SOURCE CODE TO PERFORM, OR FOR ANY OTHER REASON.

OpenVision retains all copyrights in the donated Source Code. OpenVision also retains copyright to derivative works of the Source Code, whether created by OpenVision or by a third party. The OpenVision copyright notice must be preserved if derivative works are made based on the donated Source Code. OpenVision Technologies, Inc. has donated this Kerberos Administration system to MIT for inclusion in the standard Kerberos 5 distribution. This donation underscores our commitment to continuing Kerberos technology development and our gratitude for the valuable work which has been performed by MIT and the Kerberos community.

Portions contributed by Matt Crawford were work performed at Fermi National Accelerator Laboratory, which is operated by Universities Research Association, Inc., under contract DE-AC02-76CHO3000 with the U.S. Department of Energy.

The implementation of the Yarrow pseudo-random number generator in `src/lib/crypto/yarrow` has the following copyright:

Copyright 2000 by Zero-Knowledge Systems, Inc.

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 Zero-Knowledge Systems, Inc. not be used in advertising or publicity pertaining to distribution of the software without specific, written prior permission. Zero-Knowledge Systems, Inc. makes no representations about the suitability of this software for any purpose.

It is provided "as is" without express or implied warranty. ZERO-KNOWLEDGE SYSTEMS, INC. DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, IN NO EVENT SHALL ZERO-KNOWLEDGE SYSTEMS, INC. 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 TORTUOUS ACTION, ARISING OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS SOFTWARE.

The implementation of the AES encryption algorithm in `src/lib/crypto/aes` has the following copyright:

Copyright (c) 2001, Dr Brian Gladman , Worcester, UK.

All rights reserved.

LICENSE TERMS The free distribution and use of this software in both source and binary form is allowed (with or without changes) provided that: 1. distributions of this source code include the above copyright notice, this list of conditions and the following disclaimer; 2. distributions in binary form include the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other associated materials; 3. the copyright holder's name is not used to endorse products built using this software without specific written permission. DISCLAIMER This software is provided 'as is' with no explicit or implied warranties in respect of any properties, including, but not limited to, correctness and fitness for purpose.

The implementation of the RPCSEC_GSS authentication flavor in `src/lib/rpc` has the following copyright:

Copyright (c) 2000 The Regents of the University of Michigan.

All rights reserved.

Copyright (c) 2000 Dug Song.

All rights reserved, all wrongs reversed.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met: 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution. 3. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

NUNIT 2.2.8

The CA Licensed Product uses NUNIT r.2.2.8. Copyright © 2002-2004 James W. Newkirk, Michael C. Two, Alexei A. Vorontsov, Charlie Poole or Copyright © 2000-2004 Philip A. Craig. The terms and conditions governing use of such component are as follows:

Copyright © 2002-2004 James W. Newkirk, Michael C. Two, Alexei A. Vorontsov, Charlie Poole

Copyright © 2000-2004 Philip A. Craig

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 (see the following) in the product documentation is required.

Portions Copyright © 2002 James W. Newkirk, Michael C. Two, Alexei A. Vorontsov or Copyright © 2000-2002 Philip A. Craig

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.

Aleksey XML Security Library v.1.2.9 and the xmlsec-nss Library

Terms and Conditions for the Use of Aleksey XML Security Library v.1.2.9 and the xmlsec-nss library:

Copyright (C) 2002-2003 Aleksey Sanin. 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 ALEKSEY SANIN 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.

Except as contained in this notice, the name of Aleksey Sanin shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

xmlsec-nss Library

This product includes the xmlsec-nss library, which is subject to, among others, the Mozilla Public License v.1.1. You may not use this library except in compliance with such license.

Terms and Conditions for the Use of xmlsec-nss:

Copyright (C) 2002-2003 Aleksey Sanin. All Rights Reserved.

Copyright (c) 2003 America Online, Inc. 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.

Portions of the Software were created using source code and/or APIs governed by the Mozilla Public License (MPL). The MPL is available at <http://www.mozilla.org/MPL/MPL-1.1.html>. The MPL permits such portions to be distributed with code not governed by MPL, as long as the requirements of MPL are fulfilled for such portions.

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 ALEKSEY SANIN 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.

Except as contained in this notice, the name of Aleksey Sanin shall not be used in advertising or otherwise to promote the sale, use or other dealings in this Software without prior written authorization from him.

Mozilla Public License v1.1 for xmlsec-nss

This product includes the xmlsec-nss library, which is subject to, among others, the Mozilla Public License v.1.1. You may not use this library except in compliance with such license.

Terms and Conditions for the Use of xmlsec-nss:

MOZILLA PUBLIC LICENSE

Version 1.1

1. Definitions.

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

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

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

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

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

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

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

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

1.8. "License" means this document.

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

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

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

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

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

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

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

1.12. "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License or a future version of this License issued under Section 6.1. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

2. Source Code License.

2.1. The Initial Developer Grant.

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

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

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

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

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

2.2. Contributor Grant.

Subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license

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

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

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

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

3. Distribution Obligations.

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

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

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

3.4. Intellectual Property Matters

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

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

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

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

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

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

4. Inability to Comply Due to Statute or Regulation.

If it is impossible for You to comply with any of the terms of this License with respect to some or all of the Covered Code due to statute, judicial order, or regulation then You must: (a) comply with the terms of this License to the maximum extent possible; and (b) describe the limitations and the code they affect. Such description must be included in the LEGAL file described in Section 3.4 and must be included with all distributions of the Source Code. Except to the extent prohibited by statute or regulation, such description must be sufficiently detailed for a recipient of ordinary skill to be able to understand it.

5. Application of this License.

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

6. Versions of the License.

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

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

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

7. DISCLAIMER OF WARRANTY.

COVERED CODE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED CODE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED CODE IS WITH YOU. SHOULD ANY COVERED CODE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED CODE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

8. TERMINATION.

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

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

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

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

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

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

9. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED CODE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

10. U.S. GOVERNMENT END USERS.

The Covered Code is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Code with only those rights set forth herein.

11. MISCELLANEOUS.

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

12. RESPONSIBILITY FOR CLAIMS.

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

13. MULTIPLE-LICENSED CODE.

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

EXHIBIT A -Mozilla Public License.

``The contents of this file are subject to the Mozilla Public License Version 1.1 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at <http://www.mozilla.org/MPL/>

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied.

See the License for the specific language governing rights and limitations under the License.

The Original Code is _____.

The Initial Developer of the Original Code is _____.

Portions created by _____ are Copyright (C) _____ . All Rights Reserved.

Contributor(s): _____.

Alternatively, the contents of this file may be used under the terms of the _____ license (the "[] License"), in which case the provisions of [] License are applicable instead of those above. If you wish to allow use of your version of this file only under the terms of the [] License and not to allow others to use your version of this file under the MPL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the [] License. If you do not delete the provisions above, a recipient may use your version of this file under either the MPL or the [] License."

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

=====

LEGAL form mozilla source code base directory

=====

Please be apprised of the following Legal Notices:

A) The U.S. District Court for the Eastern District of Virginia has ruled that the Netscape Navigator code does not infringe Wang's U.S. Patent No. 4,751,669 ("the '669 Patent") because: 1) HTML is not Videotex as defined by the '669 patent; 2) web servers are not central suppliers; and 3) Navigator does not "connect," as defined by the '669 Patent, to web servers on the Internet. Wang may appeal this decision to the Federal Circuit. Wang contended that its Patent disclosing a "Videotex" system, is infringed by the following functionality in the Netscape Navigator code: 1) the animated logo and status line indicators --See Claims 1,8 and 9; 2) the "File Save As" function --See Claims 23-27; 3) Bookmarks and Rename Bookmarks in the Properties window --See Claims 20-22; 4) storing HTML, GIF, and JPEG files and adding filename extensions --See Claim 38

B) Intermind owns pending U.S. patent applications on communications systems which employ metadata ("channel objects") to define a control structure for information transfer. The Netscape code does not infringe as released; however, modifications which utilize channel objects as described by Intermind should be considered carefully. The following is a statement from Intermind: "Intermind's claims fundamentally involve the use of a control structure to automate communications. ...The essence of Intermind's top claim is that two devices sender and receiver have persistent storage, communicate over a network, and exchange a control structure including metadata which describes: 1) what information is to be updated, 2) when to update this information, and 3) how to transfer the updated information. In addition, at least the receiving device must be able to process the metadata in order to perform the update determination and transfer. Any digital communications system which incorporates all of these elements will be covered by Intermind's patents." See Intermind.com.

C) Stac, Inc., and its licensing agent Hi/fn, own several patents which disclose data compression methods implementing an LZS compression algorithm, including U.S. Patent Nos. 4,701,745 and 5,016, 009 ("the Stac Patents"). The Netscape Communicator code does not perform compression. If you modify the Netscape source code to perform compression, please take notice of the Stac Patents.

D) Netscape Communications Corporation ("Netscape") does not guarantee that any source code or executable code available from the mozilla.org domain is Year 2000 compliant.

=====

mozilla\security\nss\pkg\solaris\common_files

=====

The contents of this package are subject to the Mozilla Public License Version 1.1 (the "License"); you may not use this package except in compliance with the License. You may obtain a copy of the License at <http://www.mozilla.org/MPL/>

Software distributed under the License is distributed on an "AS IS" basis, WITHOUT WARRANTY OF ANY KIND, either express or implied. See the License for the specific language governing rights and limitations under the License.

The Original Code is the Netscape security libraries.

The Initial Developer of the Original Code is Netscape Communications Corporation. Portions created by Netscape are Copyright (C) 1994-2000 Netscape Communications Corporation. All Rights Reserved.

Contributor(s):

Alternatively, the contents of this package may be used under the terms of the GNU General Public License Version 2 or later (the "GPL"), in which case the provisions of the GPL are applicable instead of those above. If you wish to allow use of your version of this package only under the terms of the GPL and not to allow others to use your version of this package under the MPL, indicate your decision by deleting the provisions above and replace them with the notice and other provisions required by the GPL. If you do not delete the provisions above, a recipient may use your version of this package under either the MPL or the GPL.

xmlsec-gnutls

xmlsec-gnutls is an open source library that is used with the CA software. The xmlsec-gnutls library is not owned by CA, Inc. Use, copying, distribution and modification of the xmlsec-gnutls library is governed by the GNU Lesser General Public License v. 2.1. A copy of the LGPL license can be found in the http://opensrcd.ca.com/ips/2584_4/ directory from which the xmlsec-gnutls library is distributed. Additionally, a copy of the LGPL license can be found at <http://opensource.org/license/lgpl-license.php> or write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA. CA makes the source code for the xmlsec-gnutls library available at http://opensrcd.ca.com/ips/2584_4/. Use of the CA software is governed solely by the CA end user license agreement ('EULA'), not by the LGPL license. You cannot use, copy, modify or redistribute any CA code except as may be expressly set forth in the CA EULA. The xmlsec-gnutls library is provided 'AS IS' WITHOUT WARRANTY OR CONDITION OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Further details of the disclaimer of warranty with respect to the xmlsec-gnutls library can be found in the LGPL license itself. To the full extent permitted under applicable law, CA disclaims all warranties and liability arising from or related to any use of the xmlsec-gnutls library.

OpenSSL 0.9.8.d and 0.9.8.h

This product includes software developed by the OpenSSL Project 0.9.8.d and 0.9.8.h for use in the OpenSSL Toolkit (<http://www.openssl.org/>). This product also includes libraries from an SSL implementation written by Eric Young (ey@cryptsoft.com).

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

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>). Terms and Conditions for the Use of `xmlsec-openssl`:

OpenSSL License

Copyright (c) 1998-2003 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

This product includes software written by Eric Young (eay@cryptsoft.com). Terms and Conditions for the Use of xmlsec-openssl:

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 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 licence and distribution terms for any publicly 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.]

OpenLDAP 2.4 and 2.3.20

This product includes software developed by The OpenLDAP Foundation. The software is distributed in accordance with the following license agreement.

The OpenLDAP Public License

Version 2.8, 17 August 2003

Redistribution and use of this software and associated documentation ("Software"), with or without modification, are permitted provided that the following conditions are met:

1. Redistributions in source form must retain copyright statements and notices,
2. Redistributions in binary form must reproduce applicable copyright statements and notices, this list of conditions, and the following disclaimer in the documentation and/or other materials provided with the distribution, and
3. Redistributions must contain a verbatim copy of this document. The OpenLDAP Foundation may revise this license from time to time. Each revision is distinguished by a version number. You may use this Software under terms of this license revision or under the terms of any subsequent revision of the license.

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

The names of the authors and copyright holders must not be used in advertising or otherwise to promote the sale, use or other dealing in this Software without specific, written prior permission. Title to copyright in this Software shall at all times remain with copyright holders.

OpenLDAP is a registered trademark of the OpenLDAP Foundation. Copyright 1999-2003 The OpenLDAP Foundation, Redwood City, California, USA. All Rights Reserved. Permission to copy and distribute verbatim copies of this document is granted.

PCRE 6.3

Portions of this product include software developed by Philip Hazel. The University of Cambridge Computing Service software is distributed in accordance with the following license agreement.

THE BASIC LIBRARY FUNCTIONS

Written by: Philip Hazel

Email local part: ph10

Email domain: cam.ac.uk

University of Cambridge Computing Service,
Cambridge, England.

Copyright (c) 1997-2008 University of Cambridge

All rights reserved.

THE C++ WRAPPER FUNCTIONS

Contributed by: Google Inc.

Copyright (c) 2007-2008, Google Inc.

All rights reserved.

THE "BSD" LICENCE

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

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

zlib 1.2.3

This product includes zlib developed by Jean-loup Gailly and Mark Adler.

ZThread 2.3.2

Portions of this product include software developed by Eric Crahen. The ZThread software is distributed in accordance with the following license agreement.

Copyright (c) 2005, Eric Crahen

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.