

# **CA Access Control Premium Edition**

## **Release Notes**

**r12.5 SP1**



This documentation and any related computer software help programs (hereinafter referred to as the "Documentation") are for your informational purposes only and are 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 used or disclosed by you except as may be permitted in 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 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 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 THE END USER 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 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 © 2009 CA. All rights reserved. All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies.

## Third-Party Notices

CONTAINS IBM(R) 32-bit Runtime Environment for AIX(TM), Java(TM) 2  
Technology Edition, Version 1.4 Modules

(c) Copyright IBM Corporation 1999, 2002

All Rights Reserved

## CA Product References

This document references the following CA products:

- CA Access Control Premium Edition
- CA Access Control
- CA Single Sign-On (CA SSO)
- CA Top Secret®
- CA ACF2™
- CA Audit
- CA Network and Systems Management (CA NSM, formerly Unicenter NSM and Unicenter TNG)
- CA Software Delivery (formerly Unicenter Software Delivery)
- CA Service Desk Manager (formerly Unicenter Service Desk)
- CA Enterprise Log Manager
- CA Identity Manager

## Contact CA

### Contact Technical 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

### Provide Feedback

If you have comments or questions about CA product documentation, you can send a message to [techpubs@ca.com](mailto:techpubs@ca.com).

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

## Documentation Changes

The following documentation updates have been made since the r12.5 release of this documentation:

- [CA Access Control Premium Edition Installation Media](#) (see page 16)—Updated topic with Solaris installation media.
- [CA Access Control Installation Media](#) (see page 17)—Updated topic with Solaris installation media.
- [New and Changed Features](#) (see page 21)—Updated chapter for this release.
- [Operating System Support](#) (see page 29)—Updated chapter for this release.
- [System Requirements](#) (see page 37)—Updated chapter for this release.
- [Considerations and Known Issues](#) (see page 53)—Updated chapter for this release.
- [Third-Party License Agreements](#) (see page 113)—Updated chapter for this release.

# Contents

---

## Chapter 1: Welcome 15

CA Access Control Editions .....	15
CA Access Control Premium Edition Installation Media .....	16
CA Access Control Installation Media .....	17
Complementary CA Enterprise Log Manager License .....	18
A Single Documentation Set for All Editions .....	19

## Chapter 2: New and Changed Features 21

New and Changed Features in r12.5 SP1 .....	21
PUPM Target System Feed .....	21
PUPM Password Extraction Utility .....	21
PUPM Integration with CA Service Desk Manager .....	21
PUPM Endpoint Support .....	22
Solaris Support for CA Access Control Enterprise Management .....	22
Manual Installation of the Database Schema .....	22
Extended Operating System Support for UNAB .....	23
Active Directory Domain Controllers to Use or Ignore .....	23
UNAB Supports LDAP Root as Base Search .....	23
sepass Integration with UNAB on Solaris .....	23
Other Enhancements .....	24
New and Changed Features in r12.5 .....	24
Privileged User Password Management .....	25
UNIX Authentication Broker .....	25
Unified Data and Resource Protection Console .....	26
Variables Support .....	26
Policy Import .....	26
Streamlined Installation .....	26
CA Enterprise Log Manager Integration .....	27

## Chapter 3: Operating System Support 29

Operating System Support for Endpoints .....	29
Operating System Support for Server Components .....	32
CA Access Control Endpoint Management .....	32
CA Access Control Premium Edition Enterprise Server .....	33
Distribution Server .....	33
Operating System Support for CA DSM Delivery .....	34

---

Operating System Support for UNAB .....	34
PUPM Endpoint Support .....	35

## **Chapter 4: System Requirements** **37**

Windows Endpoint Requirements .....	37
UNIX Endpoint Requirements .....	37
Policy Model Database Requirements .....	38
CA Access Control Endpoint Management Requirements .....	38
CA Access Control Premium Edition Enterprise Server Requirements .....	39
Enterprise Reporting Requirements .....	40
Distribution Server Requirements .....	41
UNAB Requirements .....	41

## **Chapter 5: Documentation** **43**

Guides .....	43
--------------	----

## **Chapter 6: FIPS Compliance** **47**

FIPS Operational Modes .....	47
Unsupported Operating Systems for FIPS-only Mode .....	47
FIPS Encryption Libraries .....	47
FIPS Algorithms Used .....	48
Storage of Keys and Certificates .....	48
Features Affected (UNIX) .....	48
Features Affected (Windows) .....	50

## **Chapter 7: Considerations and Known Issues** **53**

Windows Endpoint Considerations .....	53
Versions You Can Upgrade From .....	53
CA Access Control r12.5 SP1 Endpoint Requires a Hot Fix to Manage Policy Models on CA	
Access Control r12.5 and r12.0 SP1 .....	53
Reboot May Be Required When Upgrading .....	54
x64 Feature Support Limitations .....	54
Short File Name Rules (8.3 Format) Are Not Supported .....	54
IPv6 Support .....	55
McAfee Entercept Buffer Overflow .....	55
Supported Installation Languages .....	55
CA Access Control Backdoor .....	56
CA Access Control Database Size Limitation .....	57
CA Access Control Generates the Login Session ID .....	57
Conflicts with Other Software in Databases You Create .....	58



---

Mainframe Password Synchronization Prerequisite .....	58
Firewall Settings .....	58
IA64 Feature Support Limitations .....	58
Windows Server 2008 Feature Support Limitations .....	59
TCP and SURROGATE Class Are Not Active By Default .....	59
Enterprise Users Do Not Correspond to the _undefined User .....	59
Policy Model Names Are Case-sensitive .....	59
seaudit Displays Trace Records by User Name .....	60
Process Creation Trace Limitations .....	60
PMDB and Host Names Do Not Support Non-English Characters .....	60
Password Propagation Requires a Restart When You Change Encryption Modes .....	60
Authorization Recognizes Resource Group Ownership .....	61
Non-IPv4 telnet Connections Are Not Secured on Windows Server 2008 .....	61
Login Interception is Supported by Sub-authentication Method Only .....	62
Policy Manager Interface Discontinued .....	63
Audit Log Backup Files Are Protected by Default .....	63
Cannot Define Record In SPECIALPGM Class for Incoming Network Interception Events .....	63
Change to Default Audit Value for Some Users .....	63
Change to Value of AUDIT Property for GROUP Records .....	64
SAN Support .....	64
Restart Message Pops Up During Installation, Uninstallation, or Upgrade on Windows Server 2008 .....	65
PUPM Agent Programmable Check Out Requires Case Sensitive Host Name .....	65
Upgrades from r8 SP1 GA Are Not Supported .....	65
Upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3 Is Not Supported .....	65
Uninstall Does Not Remove CA License Files .....	65
Windows Endpoint Known Issues .....	65
Cannot Import Windows Native Users and Groups During Installation .....	66
"Insufficient Privileges to Modify File" Message Appears During Upgrade .....	66
SPECIALPGM Rule Not Removed from CA Access Control Database After Silent Upgrade .....	66
PUPM Agent Application to Application Fails to Change Provisioning Account Passwords .....	66
Privileged Processes Can Save and Restore a Registry Tree Without Authorization .....	66
IA64 and x64 Architectures: Cannot Install a Prerequisite in Silent Mode .....	66
FIPS Only Mode on Windows x64 .....	67
UNIX Endpoint Considerations .....	67
Default Installation Location .....	67
Versions You Can Upgrade From .....	67
CA Access Control for Linux390 Requires Java Version 1.5 and Above .....	67
CA Access Control Restarts UNAB When Installed and Uninstalled .....	67
Configure PAM to Work on AIX .....	68
Linux Kernel Recompilation .....	68
Streams Module Is Not Active by Default .....	68
PDF Documentation Requires Adobe Reader 7.0.7 .....	68

---

---

Some Utilities Require That You Start The Kernel .....	69
RENAME Authority Depends on READ Authority on a 2.4 Kernel RHEL .....	69
SNMP Extension of selogrd Requires a Variable for a Non-Default Installation Path .....	69
Access to SSH Failed Login Attempts Requires PAM Configuration .....	69
PAM Configuration for CA Access Control Features .....	70
Lookaside Database Creation from LDAP DIT Requirements .....	70
telnet and rsh Require Specific PAM Configuration .....	70
SNMP Configuration .....	71
syslog Messages That Have a Reduced Priority .....	71
syslog Messages Are Affected by the Product Name Change .....	71
Enterprise Users Do Not Correspond to the _undefined User .....	72
The All Users Mask (*) Applies to Users That Are Not Defined .....	72
serevu Configuration .....	72
serevu Configuration for Working with a Policy Model .....	72
Compiling API Samples .....	72
Compatibility Library Missing on x86_64bit Linux .....	73
FIPS 140-2 Library Upgrade .....	73
Authorization Recognizes Resource Group Ownership .....	73
Unicenter Integration is Not Supported on HP-UX Itanium and RHEL Itanium .....	73
CA Access Control Generates the Login Session ID .....	74
Policy Manager Interface Discontinued .....	74
Propagating CA Access Control and UNAB to a New Solaris Zone .....	74
Security Administrator Discontinued .....	74
Audit Log Backup Files Are Protected by Default .....	74
Report Agent and PUPM Agent Are Not Supported on Linux IA64 .....	75
Change Encryption Key After You Patch libcryptscr.so.125.0 .....	75
Systemwide Audit Mode for UNIX Upgrades .....	75
Change to Default Audit Value for Some Users .....	76
Change to Value of AUDIT Property for GROUP Records .....	76
SAN Support .....	77
IPv6 Support .....	77
Upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3 Is Not Supported .....	77
UNIX Endpoint Known Issues .....	78
CA Access Control Fails to Start on SLES 11x86_64 .....	78
Report Agent Multi-Threading is Not Supported on Linux Z-series (s390x) .....	78
Change LOGINFLAGS Value to NONE If UNAB is Installed on an CA Access Control Endpoint ....	79
Upgrade from CA Access Control r12.5 Using Native Packages Fails on Linux Kernel 2.4 .....	80
Issues in Interactive Mode Installation .....	80
CA Access Control Must Start After ENF on Linux .....	80
STOP is Not Activated when Native Stack Randomization is Enforced on Linux .....	80
Cannot Use UNIX selang Environment to Create User When passwd_format=NT .....	81
install_base May Show Errors in a Solaris Zones Installation .....	81
Use of uninstall_AC on Global Zone May Prevent Zone Users from Logging In .....	81

---

---

Early RPM Package Manager Versions Fail When Building Customized Package .....	81
Pre-r12.0 Versions Must Use a Maximum of 54 Characters for the Encryption Key .....	81
When PAM is Active segrace Is Not Called for FTP and SSH Grace Login .....	82
PAM Does Not Work on Linux s390x with Older /lib64/libc.so.6 Library .....	82
RPM Package Verification May Return Errors .....	82
CA Access Control Does Not Reset Passwords Once the Grace Period Expires .....	82
Solaris Network Event Bypass Does Not Work for Some Processes .....	82
API Libraries for Linux Z-series Are 32-bit .....	83
Client-Server Communication Mode Incompatibility .....	83
HP-UX requires an Updated Patch Level .....	83
Use of selang -d on a Backed Up PMDB Can Lead to Issues .....	83
Native Package Upgrade from r12.0 CR1 Does Not Work .....	84
Stat Interception Calls Not Supported on AIX Systems .....	84
Cannot Stop CA Access Control on an HP-UX 11.11 Computer .....	84
UNAB Considerations .....	84
HP-UX Feature Support Limitations .....	84
UNAB Users Cannot Change Account Password According to Specified Password Policy .....	84
UNAB for Linux390 Requires Java 1.5 and Above for Remote Management .....	85
sepass Integration with UNAB Endpoints .....	85
Log In to UNAB with Active Directory Account .....	85
License Agreement Acceptance Keyword is Case Insensitive .....	85
Disable Local User Account After Migration .....	86
You Cannot Log In to CA Access Control for UNIX Using 'Administrator' Account When UNAB Is Installed .....	86
UNAB Known Issues .....	86
Active Directory User Cannot Change Password on Solaris .....	86
UNAB Not Supported on Linux IA64, Solaris x86 and x64 .....	86
UNAB Not Automatically Restarted After CA Access Control Is Installed on a UNAB Endpoint ....	87
seaudit Reports "Deny" Events on UNAB Agent .....	87
UNAB Entries Contain Blank Fields in Event Viewer .....	87
User Prompted for New Password Twice and Received Incorrect Password Change Failure Message .....	88
UNAB is not FIPS140-2 and IPV6 Compliant .....	88
Successful Login to Host Generates an Error Message .....	88
uxconsole -manage -edit Option is Not Supported .....	88
UNAB Not Started by CA Access Control Watchdog on Linux x64 .....	88
UNAB Does Not Support CA Access Control r8.0 SP1 and r12.0 SP1 .....	89
Ten-Second Interval between uxconsole -activate and -deactivate Commands .....	89
Server Components Considerations .....	89
Disable Tunneled Clear Text Passwords on SSH Endpoints .....	89
Default JBoss Port .....	89
The r12.5 SP1 CA Access Control Enterprise Management Server Does Not Support CA Identity Manager r12.5 and r12.5 SP1 .....	90

---

---

Windows Agentless Endpoint Management from CA Access Control Enterprise Management for UNIX Requires a Windows Distribution Server .....	90
The PUPM Endpoints and Accounts Feeder CSV File Fields are Case Sensitive .....	90
Maximum Recommended Records in the PUPM Feeder CSV is 500 Endpoints or Accounts .....	90
Search Root Parameters Are Case Sensitive .....	91
Do Not Configure More Than a Single Oracle Schema with Reporting Tables .....	93
CA Identity Manager Provisioning Connector Server Successfully Created in PUPM but Not Validated .....	93
Log In to the Windows Endpoint Before You Configure the Endpoint in CA Access Control Enterprise Management .....	93
You Cannot Configure More Than a Single CA Identity Manager Provisioning Connector Server .....	93
CA Access Control Host Name Limitation .....	93
Cannot Configure CA Identity Manager Provisioning Connector Server Using SSL Port .....	93
Separate List of Identifier Users with a Comma .....	94
Specify the Etaadmin Full Distinguished Name .....	94
Supported JDK and JBoss Versions .....	94
CA Access Control Database Size Limitation .....	95
RDBMS Connection Fails During Installation if Java Cannot Be Found .....	95
CA Access Control Endpoint Management Shortcut Points to Port Number 8080 .....	96
CA Access Control Endpoint Management Installation Instructions Refer to Both Editions of CA Access Control .....	96
Do Not Execute the PUPM Privileged Accounts Discovery Wizard on More Than One Endpoint Type Concurrently .....	96
CA Enterprise Log Manager Does Not Include PUPM, UNAB Reports .....	96
CA Enterprise Log Manager Supports Only Trusted SSL Connection .....	97
Special Subscription Needed to View CA Enterprise Log Manager Reports from CA Access Control Enterprise Management .....	97
Set Up CA Access Control Enterprise Management to Work with Active Directory on Another Domain .....	97
Automatic Generation of Policy Undeploy Script .....	98
Communication Issues between CA Access Control Components and CA Access Control Message Queue .....	99
CA Access Control Enterprise Management Default Encryption Method Set to 256AES .....	99
Oracle Database XE Does Not Resolve the database SID as Required .....	99
Required Upgrade Sequence .....	99
Superuser Account Required for Server Components Installations .....	100
Synchronize the System Time of the CA Access Control Enterprise Management and Report Portal Computers .....	100
Prerequisite Kit Installer Considerations .....	100
PUPM Windows Agentless Connector for Active Directory Search Limitations .....	100
Do Not Use Administration API Functions Inside a seosd Exit .....	100
Uninstall Fails if You Are Not the Superuser .....	100
Server Components Known Issues .....	101

---

Cannot View or Schedule PUPM Reports Due to a "Page Encapsulation Failed" Error Message on Oracle .....	101
Roles Not Resolved When a Member of a Group with More Than 1000 Members Logs In To the CA Access Control Enterprise Management Server .....	102
Capture Snapshot Fails When Executed By a Member of an Active Directory Group With More Than 1000 Members .....	102
A CA Access Control User Not Defined a Password Cannot Log Into the CA Access Control Enterprise Management Server .....	102
PUPM SSH Device Cannot Set Password if UNAB is Installed on the Endpoint .....	103
Report Agent and DMS Fail to Communicate with Message Queue Server on CA Access Control Enterprise Management for Solaris .....	103
Japanese and Korean Reports Viewable in InfoView Only .....	103
PUPM Is Not FIPS140-2 and IPV6 Compliant .....	104
Control Characters May Cause an Application Exception .....	104
Incomprehensible Characters In the User Interface .....	104
Cannot View Audit Records for Terminals with Names Longer than 30 Characters .....	104
Report Portal Installation Fails If C:\temp Does Not Exist .....	104
Reset Host Does Not Work If GHNODE Name Contains a Space .....	105
List of Values Does Not Refresh Automatically When Data Sources Change .....	106
Refresh Mechanism in On-Demand Reports Stops Working After a Manual Refresh .....	107
Login to CA Access Control Enterprise Management Using Active Directory Administrator Account .....	108
Cannot Display r5.3 Audit Records .....	108
Cannot Change Active Directory Account Password using CA Access Control Enterprise Management Windows Connector .....	108
PMDB Audit Records Are Not Visible When Managing the PMDB .....	108
Cannot Change the Trust Property of a Monitored File .....	108
Do Not Use '\$' Character for CA Access Control Enterprise Management Database Password ..	109
"No Operation Required" Message When Modifying UNAB Host or Host Group .....	109
CA Access Control Enterprise Management Time-Out When Creating Large Policies .....	109
Non-English Installation Displays Some English Text .....	109
Cannot Deploy Policies That Contain a Trailing Backslash .....	110
Access Roles Are Not Supported in CA Access Control Enterprise Management .....	110
Report Portal Fails to Load a Service .....	110
Policy Script Validation Error Messages Are in a Different Language .....	110
PUPM Windows Agentless Connector for Active Directory Search Limitations .....	111
PUPM Windows Agentless Connector Does Not Support Windows 2000 .....	111
Define a Comma Separated List of Users When Creating a PUPM Application .....	111
Documentation Known Issues .....	111
No Alternate Text for Graphics In the SDK Guide .....	111

## Appendix A: Third-Party License Agreements

113

Software Under the Apache License .....	114
---	-----

---

Software Under the Daniel Veillard License .....	121
Software Under the OpenLDAP License .....	123
Software Under the OpenSSL License .....	126
AES 2.4 .....	132
AIX JRE 1.4.2 .....	133
AIX JRE 1.5.0 .....	133
ANTLR 2.7.5H3 .....	134
CPAN Perl 5.8.8 .....	135
CRC32 .....	136
Cyrus SASL 2.1.22 .....	138
dom4j 1.5 .....	141
Hibernate 3.2 .....	142
ICU4C 3.4 .....	143
JBoss 4.0.1 SP1 .....	144
JBoss Application Server v.4.2.3 .....	145
JBoss Native v.2.0.6 .....	146
JDOM 1.0 .....	147
MD5 Message Digest Algorithm .....	150
MIT Kerberos v5 r1.5 .....	152
nss_ldap 2.62 .....	175
Oracle JDBC Driver 10g Release 2 (10.2.0.1.0) .....	182
PCRE 6.3 .....	187
Rhino 1.6r4 .....	189
SAXPath 1 .....	190
SHA-1 .....	193
Sun JDK 1.4.2_13 .....	194
Sun JDK 1.6.0 .....	205
Sun JRE 1.5.0_18 .....	220
XNTP v.3-5.93 .....	234
XScreenSaver .....	235
Zlib 1.2.3 .....	235
ZThread 2.3.2 .....	236

# Chapter 1: Welcome

---

Welcome to CA Access Control Premium Edition r12.5SP1. This guide describes new enhancements, changes to existing features, operating system support, system requirements, documentation information, installation and general considerations, published solutions, and known issues for CA Access Control Premium Edition.

CA Access Control Premium Edition offers the same functionality and components as CA Access Control. In addition, it offers enterprise management and reporting capabilities, and advanced policy management features.

To simplify terminology, we refer to the product as CA Access Control throughout this guide.

This section contains the following topics:

[CA Access Control Editions](#) (see page 15)

## CA Access Control Editions

CA Access Control is available in two editions and features vary by product edition:

### **CA Access Control**

Contains the core functionality that provides a total security solution for open systems.

### **CA Access Control Premium Edition**

Offers the same functionality and components as CA Access Control. In addition, it offers enterprise management and reporting capabilities, advanced policy management features, and CA Enterprise Log Manager for collecting and managing CA Access Control audit logs.

## CA Access Control Premium Edition Installation Media

CA Access Control Premium Edition components are available on ten optical discs:

- CA Access Control Endpoint Components for Windows

Contains CA Access Control for Windows installation files for endpoint components. These include the core CA Access Control functionality required for a standalone Windows computer, additional executables and libraries to extend core functionality (for example, Policy Model support), runtime SDK files and libraries and API samples, mainframe password synchronization, Stack Overflow Protection (STOP), and the PUPM Agent.

- CA Access Control Endpoint Components for UNIX

Contains CA Access Control for UNIX installation files for endpoint components. These include the core CA Access Control functionality required for a standalone UNIX computer, additional binaries and scripts to extend core functionality (for example, Policy Model support), runtime SDK files and libraries and API samples, mainframe password synchronization, Stack Overflow Protection (STOP), and the PUPM Agent.

It also contains UNAB installation files.

- CA Access Control Premium Edition Server Components for Windows

Contains installation files for CA Access Control Endpoint Management, CA Access Control Distribution Server, and CA Access Control Enterprise Management.

CA Access Control Enterprise Management includes CA Access Control Endpoint Management, CA Access Control endpoint components for Windows, CA Access Control Distribution Server components, and the Deployment Map Server (DMS).

This optical disc also includes report packages for import in CA Business Intelligence.

- CA Access Control Premium Edition Server Components for Solaris

Contains installation files for CA Access Control Endpoint Management, CA Access Control Distribution Server, and CA Access Control Enterprise Management.

CA Access Control Enterprise Management includes CA Access Control Endpoint Management, CA Access Control endpoint components for Solaris, CA Access Control Distribution Server components, and the Deployment Map Server (DMS).

This optical disc also includes report packages for import in CA Business Intelligence.

- CA Access Control Premium Edition Report Portal for Windows (Disc 1)

CA Business Intelligence Release 2.1 installation files.



- CA Access Control Premium Edition Report Portal for Windows (Disc 2)  
Business Objects Release XIR2 SP5 patch for use by Oracle Database 11g users.
- CA Access Control Premium Edition Report Portal for UNIX (Disc 1)  
CA Business Intelligence Release 2.1 installation files.
- CA Access Control Premium Edition Report Portal for UNIX (Disc 2)  
BusinessObjects XIR2 Release 2.1 SP5 patch for use by Oracle Database 11g users.
- CA Access Control Third Party Components for Windows  
Contains a prerequisite installer installs prerequisite third-party software (JDK and JBoss) on Windows. These software applications are required before you can install CA Access Control Premium Edition Server Components.
- CA Access Control Third Party Components for Solaris  
Contains prerequisite third-party software (JDK and JBoss) for Solaris. These software applications are required before you can install CA Access Control Premium Edition Server Components.

**Note:** CA Access Control Premium Edition installation media is different from that of CA Access Control.

## CA Access Control Installation Media

CA Access Control components are available on six optical discs:

- CA Access Control Endpoint Components for Windows  
Contains CA Access Control for Windows installation files for endpoint components. These include the core CA Access Control functionality required for a standalone Windows computer, additional executables and libraries to extend core functionality (for example, Policy Model support), runtime SDK files and libraries and API samples, mainframe password synchronization, and Stack Overflow Protection (STOP).
- CA Access Control Endpoint Components for UNIX  
Contains CA Access Control for UNIX installation files for endpoint components. These include the core CA Access Control functionality required for a standalone UNIX computer, additional binaries and scripts to extend core functionality (for example, Policy Model support), API libraries and samples, mainframe password synchronization, and Stack Overflow Protection (STOP).  
  
It also contains UNAB installation files for use with CA Access Control Premium Edition.

- CA Access Control Server Components for Windows  
Contains CA Access Control Endpoint Management for Windows.
- CA Access Control Server Components for Solaris  
Contains CA Access Control Endpoint Management for Solaris.
- CA Access Control Third Party Components for Windows  
Contains a prerequisite installer installs prerequisite third-party software (JDK and JBoss) on Windows. These software applications are required before you can install CA Access Control Premium Edition Server Components.
- CA Access Control Third Party Components for Solaris  
Contains prerequisite third-party software (JDK and JBoss) for Solaris. These software applications are required before you can install CA Access Control Premium Edition Server Components.

**Note:** CA Access Control Premium Edition installation media is different from that of CA Access Control.

## Complementary CA Enterprise Log Manager License

As the owner of the CA Access Control Premium Edition, you are also entitled to the CA Enterprise Log Manager product for the limited use of collecting, managing and reporting on CA Access Control audit logs. First, you must obtain a license for "CA Enterprise Log Manager Server for CA Access Control" (Codes ELMSAC99100/ELMSAC991), which is offered to CA Access Control Premium Edition customers for a symbolic price.

To obtain your license for CA Enterprise Log Manager in North America, contact your local account representative. If you are outside of North America, call your local account representative or the local CA office. You can download CA Enterprise Log Manager online through the Download Center on the CA Support Online web site at <http://ca.com/support> under your CA Access Control Premium Edition download links.

## A Single Documentation Set for All Editions

We supply the same documentation for both editions. Because we supply the same documentation for both editions, some sections of some guides apply only to CA Access Control Premium Edition. The following describes how the documentation applies to CA Access Control:

- Release Notes

Some information in this guide applies only to CA Access Control Premium Edition features.

- Implementation Guide

The following chapters apply only to CA Access Control Premium Edition:

- Installing the Enterprise Management Server
- Integrating with CA Enterprise Log Manager
- Implementing Enterprise Reporting
- Migrating PMDs to an Advanced Policy Management Environment
- Installing a Disaster Recovery Deployment
- Upgrading from CA Access Control r12.0 SP1

Other chapters also describe or make references to features that only apply to CA Access Control Premium Edition. For example, the Report Agent, which is part of the endpoint installation, is only relevant for CA Access Control Premium Edition.

- Endpoint Administration Guide for Windows

The entire guide applies to CA Access Control.

- Endpoint Administration Guide for UNIX

The entire guide applies to CA Access Control.

- Reference Guide

Some information in this guide applies only to CA Access Control Premium Edition features.

- selang Reference Guide

Some information in this guide applies only to CA Access Control Premium Edition features.

- Enterprise Administration Guide

The entire guide applies only to CA Access Control Premium Edition.

- Troubleshooting Guide

Some information in this guide applies only to CA Access Control Premium Edition features.

To simplify terminology, we refer to the product as CA Access Control throughout the documentation.

# Chapter 2: New and Changed Features

---

This section contains the following topics:

[New and Changed Features in r12.5 SP1](#) (see page 21)

[New and Changed Features in r12.5](#) (see page 24)

## New and Changed Features in r12.5 SP1

The following features were added or enhanced in r12.5 SP1.

### PUPM Target System Feed

The PUPM feeder lets you create or modify many endpoints or privileged accounts in a single step. You list the endpoints or privileged accounts that you want to create in a CSV file, and use the PUPM feeder to upload the file to CA Access Control Enterprise Management for processing.

**Note:** For more information about the PUPM feeder, see the *Enterprise Administration Guide*.

### PUPM Password Extraction Utility

The PUPM password extraction utility, pwextractor, lets you extract privileged account passwords from the central database if PUPM is unavailable.

**Note:** For more information about pwextractor, see the *Enterprise Administration Guide*.

### PUPM Integration with CA Service Desk Manager

You can integrate PUPM with CA Service Desk Manager, so that PUPM validates each privileged account request against an active ticket in CA Service Desk Manager. This lets you integrate your existing CA Service Desk Manager approval process and the PUPM approval process.

**Note:** For more information about PUPM, see the *Enterprise Administration Guide*.

## PUPM Endpoint Support

CA Identity Manager Provisioning Connector supports CA Identity Manager r8.0 and the following endpoint types:

- CA Access Control
- CA ACF2
- CA Top Secret
- Windows NT
- IBM RACF
- Active Directory
- NDS Servers

PUPM support is extended to the following endpoint types:

- CA Access Control (Access Control for PUPM)
- Active Directory (Windows Agentless)

### **More information:**

[PUPM Endpoint Support](#) (see page 35)

## Solaris Support for CA Access Control Enterprise Management

CA Access Control Enterprise Management now supports Solaris SPARC 10. You can install CA Access Control Enterprise Management for Solaris in console mode only.

### **More information:**

[Operating System Support for Server Components](#) (see page 32)

## Manual Installation of the Database Schema

The installation media provides scripts to let you customize the central database before you install CA Access Control Enterprise Management. The scripts let you install CA Access Control Enterprise Management with a user account that has the least privileges required to install and manage the database.

**Note:** For more information about manually configuring the database, see the *Implementation Guide*.

## Extended Operating System Support for UNAB

UNAB now supports RHEL 3, 4 AS & ES, RHEL 5 BS & AP and SLES 9, 10 on Z-Series (S390x) and HP-UX 11i V1, V2 and V3 on IA64.

### More information:

[Operating System Support for UNAB](#) (see page 34)

## Active Directory Domain Controllers to Use or Ignore

You can now specify a list of Active Directory Domain Controllers to use or ignore when registering and working with UNAB.

**Note:** For more information about the Active Directory Domain Controllers support option, see the *Implementation Guide*.

## UNAB Supports LDAP Root as Base Search

When you install a UNAB endpoint, you can specify the LDAP root as the base search for LDAP queries. After installation, you can use CA Access Control Enterprise Management to configure this behavior for UNAB hosts and host groups.

In previous releases, you could specify only the user or group container as the base search for LDAP queries.

**Note:** For more information about installing UNAB, see the *Implementation Guide*.

## sepass Integration with UNAB on Solaris

The sepass utility is integrated with UNAB on Solaris. The integration lets users change their Active Directory passwords on Solaris endpoints on which both CA Access Control and UNAB are installed.

### More information:

[sepass Integration with UNAB Endpoints](#) (see page 85)

## Other Enhancements

The following enhancements have also been made to r12.5 SP1:

- **secons -db function**

This function lets you batch delete XUSER records in the CA Access Control database that no longer exist in the native environment.

**Note:** For more information about the secons utility, see the *Reference Guide*.

- **Password-protected certificates**

You can now use password-protected certificates for SSL communication.

**Note:** For more information about encryption, see the *Implementation Guide*.

- **uxconsole -detail option**

This option lets you display the user properties in detail. You can use this option with both the -manage and -status arguments.

**Note:** For more information about the uxconsole utility, see the *Reference Guide*.

## New and Changed Features in r12.5

The following features were added or enhanced in r12.5.



## Privileged User Password Management

Privileged User Password Management (PUPM) is the process through which an organization secures, manages, and tracks all activities associated with the most powerful accounts within the organization.

PUPM in CA Access Control provides role-based access management for privileged accounts on target endpoints from a central location. PUPM also provides secure storage of privileged accounts and application ID passwords, and controls access to privileged accounts and passwords based on policies. Further, PUPM manages privileged accounts and application password lifecycle and let you remove passwords from configuration files and scripts.

PUPM empowers system users to delegate the management of users and access privileged accounts. Users can manage their access to privileged accounts using the PUPM self-service mechanism and request access to privileged accounts as an exception.

CA Access Control integration with CA Enterprise Log Manager provides accountability and tracing of privileged accounts usage.

**Note:** For more information about PUPM, see the *Enterprise Administration Guide*.

## UNIX Authentication Broker

UNIX Authentication Broker (UNAB) lets you log in to UNIX computers using an Active Directory data store. This means you can use a single repository for all your users, letting them log in to all platforms with the same user name and password.

Integrating UNIX accounts with Active Directory enforces strict authentication and password policies, transferring the rudimentary UNIX user and group properties to Active Directory. This lets you manage UNIX users and groups in the same location that you also manage Windows users and groups.

**Note:** For more information about UNAB, see the *Implementation Guide*.

## Unified Data and Resource Protection Console

CA Access Control Enterprise Management is enhanced to provide an integrated console for Data and Resource Protection (DRP) capabilities that CA Access Control provides. DRP capabilities in CA Access Control Enterprise Management include:

- Managing privileged user accounts.
- Managing Active Directory user and group access to UNAB hosts.
- Displaying CA Access Control, PUPM, and UNAB reports that are generated by CA Enterprise Log Manager.

## Variables Support

Variables let you deploy the same policy to endpoints that have different configurations and different operating systems. You can use variables to deploy the same policy to Windows and Solaris endpoints despite the different CA Access Control installation location on each operating system.

**Note:** For more information about variables, see the *Enterprise Administration Guide*.

## Policy Import

Policy import is the process of migrating an existing policy to an advanced policy management environment that lets you deploy and undeploy policies and check the deployment and deviation status of policies.

**Note:** For more information about policy import, see the *Implementation Guide*.

## Streamlined Installation

The installation of CA Access Control r12.5 was simplified to help you to easily deploy CA Access Control in your enterprise. The installation process of CA Access Control r12.5 was streamlined to allow you to quickly deploy CA Access Control Enterprise Management and CA Access Control. The CA Access Control Enterprise Management wizard based installation guides you through the steps and enables you to install CA Access Control Enterprise Management on a single server.

**Note:** For more information, see the *Implementation Guide*.

## CA Enterprise Log Manager Integration

CA Access Control Enterprise Management is enhanced to provide a unified console for CA Access Control, PUPM, and UNAB CA Enterprise Log Manager reports. CA Access Control Enterprise Management displays the CA Enterprise Log Manager reports directly from the console, so you do not need to access CA Enterprise Log Manager to view the reports. CA Enterprise Log Manager contains dozens of reports that display information from numerous sources of information, including:

- Privileged accounts activity reports
- UNAB activity reports
- CA Access Control usage reports



# Chapter 3: Operating System Support

This section contains the following topics:

[Operating System Support for Endpoints](#) (see page 29)

[Operating System Support for Server Components](#) (see page 32)

[Operating System Support for CA DSM Delivery](#) (see page 34)

[Operating System Support for UNAB](#) (see page 34)

[PUPM Endpoint Support](#) (see page 35)

## Operating System Support for Endpoints

The following table lists the supported operating systems for CA Access Control endpoints:

Platform	Architecture	Version	Update Level	Notes
Windows	x86	Server 2003	SP2 and R2 with SP2	Standard or Enterprise editions With or without Active Directory Services
		Cluster Server 2003	SP2	Compute Cluster Edition
		Server 2008	SP1	Standard or Enterprise editions
	x64	Server 2003	SP2 and R2 with SP2	Standard or Enterprise editions
		Cluster Server 2003	SP1	Compute Cluster Edition
		Server 2008	SP1	Standard or Enterprise editions With or without Hyper-V
	Itanium (IA64)	Server 2003	SP2	Enterprise Edition
Microsoft Virtual Server	x86	2005	R2	
AIX	IBM POWER	5.2		32- and 64-bit
		5.3	ML7	32- and 64-bit

Platform	Architecture	Version	Update Level	Notes
HP-UX	IBM POWER	6.1		32- and 64-bit
	PA-RISC	11i v1 (11.11)		32- and 64-bit
		11i v1 (11.11) TCB		32- and 64-bit running Trusted Computing Base
		11i v2 (11.23)		
		11i v2 (11.23) TCB		Running Trusted Computing Base
		11i v3 (11.31)		
		11i v3 (11.31) TCB		Running Trusted Computing Base
	Itanium (IA64)	11i v2 (11.23)		
		11i v2 (11.23) TCB		Running Trusted Computing Base
		11i v3 (11.31)		
Sun Solaris	SPARC	8		32- and 64-bit
		9		32- and 64-bit
		10	Base, Update 1 to 6	64-bit
		10	Base, Update 1 to 6	
Linux	x86	RHEL 3 (AS & ES)	Base and Update 1 to 9	RHEL is Red Hat Enterprise Linux
		RHEL 4 (AS & ES)	Base and Update 1 to 7	
		RHEL 5 (BS & AP)	Base and Update 1, 2	
		SLES 9	Base, SP1, SP2, and SP4	SLES is SuSe Linux Enterprise Server
		SLES 10	Base, SP1 and SP2	
		OEL 4		OEL is Oracle Enterprise Linux
		OEL 5		

Platform	Architecture	Version	Update Level	Notes
	x64	RHEL 4 (AS & ES)	Base and Update 1 to 7	RHEL is Red Hat Enterprise Linux
		RHEL 5 (BS & AP)	Base and Update 1, 2	
		SLES 9	Base, SP1, SP2, and SP4	SLES is SuSe Linux Enterprise Server
		SLES 10	Base, SP1 and SP2	
		OEL 4		OEL is Oracle Enterprise Linux
		OEL 5		
	AMD64/EM64T	RHEL 3 (AS & ES)	Update 4 to 9	
		RHEL 4 (AS & ES)	Base and Update 1 to 7	
		RHEL 5 (BS & AP)	Base and Update 1, 2	
		SLES 9	Base, SP1, SP2 and SP4	
		SLES 10	Base, SP1 and SP2	
	Itanium (IA64)	RHEL 3 (AS & ES)	Base, Update 3, 7, 8, and 9	
		RHEL 4 (AS & ES)	Base and Update 2 to 7	
		RHEL 5 (BS & AP)	Base and Update 1, 2	
		SLES 9	SP3, SP4	
		SLES 10	Base, SP1 and SP2	
	Z-series (s390x)	RHEL 3 (AS & ES)	Base, Update 4, 7, 8, and 9	
		RHEL 4 (AS & ES)	Base and Update 1 to 7	
		RHEL 5 (BS & AP)	Base and Update 1, 2	
		SLES 9	SP2 to SP4	
		SLES 10	Base, SP1 and SP2	
VMware	x86	ESX Server 3		Base functionality

Platform	Architecture	Version	Update Level	Notes
		ESX Server 3.0.1		Base functionality
		ESX Server 3.02		Base functionality
		ESX Server 3.5	Base, SP1 and SP2	Base functionality

**Note:** This list of supported operating systems *does not* apply to the advanced policy management server components (DMS and DH), which are only supported on Enterprise Server supported platforms.

**Note:** For an updated list of supported operating systems, refer to the CA Access Control Compatibility Matrix that is available from the CA Access Control product page on CA Support Online at <http://ca.com/support>.

## Operating System Support for Server Components

The following sections list operating system support for CA Access Control server components.

**Note:** For an updated list of supported operating systems, refer to the CA Access Control Compatibility Matrix that is available from the CA Access Control product page on CA Support Online at <http://ca.com/support>.

### CA Access Control Endpoint Management

The following table lists the supported operating systems for CA Access Control Endpoint Management:

Platform	Architecture	Version	Update Level	Notes
Windows	x86	Server 2003	SP1, SP2, and R2 with SP2	Enterprise, Standard, or Web editions
Sun Solaris	SPARC	10		64-bit



## CA Access Control Premium Edition Enterprise Server

The following table lists the supported operating systems for the Enterprise Server:

Platform	Architecture	Version	Update Level	Notes
Windows	x86	Server 2003	SP1, SP2, and R2 with SP2	Enterprise Edition
Sun Solaris	SPARC	10		64-bit

The Enterprise Server also requires you set up the following additional server components:

- **A central database**—A supported third-party RDBMS (relational database management system).  
**Note:** For information about operating system support for your RDBMS, see the documentation for your product.
- **Active Directory**—(Optional) An enterprise user store.  
**Note:** You must use Active Directory as your enterprise store to manage UNAB.
- **Report Portal**—CA Business Intelligence.  
**Note:** For information about operating system support for the Report Portal, see the *CA Business Intelligence Installation Guide*.
- **CA Enterprise Log Manager**—Agent and server components that CA Enterprise Log Manager provides.  
**Note:** For information about operating system support for CA Enterprise Log Manager, see the *CA Enterprise Log Manager Release Notes*.

**Note:** You can install all of the Enterprise Server components on the same computer. If you do this, you have to make sure that your operating system supports all components, and that the combined system requirements are met.

## Distribution Server

The following table lists the supported operating systems for the Distribution Server:

Platform	Architecture	Version	Update Level	Notes
Windows	x86	Server 2003	SP1, SP2, and R2 with SP2	Enterprise, Standard, or Web editions

Platform	Architecture	Version	Update Level	Notes
Sun Solaris	SPARC	10		64-bit

**Note:** The Distribution Server is installed by default on the Enterprise Management Server. You can install more than one Distribution Server in your enterprise for failover purposes.

## Operating System Support for CA DSM Delivery

CA Access Control supports endpoint installations using CA Desktop and Server Management (CA DSM) r11.2 C3.

CA Access Control supports CA DSM delivery on all Linux and Windows operating systems that both CA Access Control endpoints *and* the CA DSM Software Delivery Agent support.

**Note:** For a list of operating systems CA DSM Software Delivery Agent supports, see CA Support Online at <http://ca.com/support>.

## Operating System Support for UNAB

The following table lists the supported operating systems for UNAB:

Platform	Architecture	Version	Update Level	Notes
Linux	x86	RHEL 3 (AS & ES)		RHEL is Red Hat Enterprise Linux
		RHEL 4 (AS & ES)		
		RHEL 5 (BS & AP)	Base and Update 1, 2	SLES is SuSe Linux Enterprise Server
		SLES 9	Base, SP1, SP2, and SP4	
		SLES 10		
	x64	RHES 4 (AS & ES)	Base and Update 1 to 7	
		RHEL 5 (BS & AP)	Base and Update 1, 2	
SLES 9		Base, SP1, SP2, and SP4	SLES is SuSe Linux Enterprise Server	

Platform	Architecture	Version	Update Level	Notes
		SLES 10	Base, SP1 and SP2	Without XEN support
	z-series(s390x)	RHEL 3 (AS & ES)	Base, Update 4,7,8 and 9	
		RHEL 4 (AS & ES)	Base and Update 2 to 7	
		RHEL 5 (BS & AP)	Base and Update 1,2	
		SLES 9	SP2 to SP4	
		SLES 10	Base, SP1 and SP2	
Sun Solaris	SPARC	8		32- and 64-bit
		9		32- and 64-bit
		10	Base, Update 1 to 6	64-bit
AIX	IBM POWER	5.2		32- and 64-bit
		5.3		32- and 64-bit
		6.1		32- and 64-bit
HP-UX	PA-RISC	11i v1 (11.11)		32- and 64-bit
		11i v2 (11.23)		
		11i v3 (1.31)		
	Itanium (IA64)	11i v2 (11.23)		
		11i v2 (11.23) TCB		Running Trusted Computing Base
		11i v3 (11.31)		
		11i v3 (11.31) TCB		Running Trusted Computing Base

## PUPM Endpoint Support

The following endpoint types are supported by CA Access Control Enterprise Management for PUPM:

- CA Access Control (Access Control for PUPM)
- Microsoft SQL Server
- Oracle Server

- Windows (Windows Agentless)
- Active Directory (Windows Agentless)
- UNIX (SSH Device)
- CA Identity Manager Provisioning Connector:
  - Active Directory
  - CA Access Control
  - CA ACF2
  - CA Top Secret
  - Windows NT
  - IBM RACF
  - NDS Servers

# Chapter 4: System Requirements

---

This section contains the following topics:

[Windows Endpoint Requirements](#) (see page 37)

[UNIX Endpoint Requirements](#) (see page 37)

[Policy Model Database Requirements](#) (see page 38)

[CA Access Control Endpoint Management Requirements](#) (see page 38)

[CA Access Control Premium Edition Enterprise Server Requirements](#) (see page 39)

[Enterprise Reporting Requirements](#) (see page 40)

[Distribution Server Requirements](#) (see page 41)

[UNAB Requirements](#) (see page 41)

## Windows Endpoint Requirements

The minimum requirements for a CA Access Control Windows endpoint are:

- **Processor**—Intel-based Pentium 4 PC 1.6 GHz
- **Memory**—1 GB RAM
- **Available disk space**—100 MB

In addition, you need disk space for your CA Access Control database, which is the repository of records describing your users and user groups, your protected files and other resources, and the authorizations that permit controlled access to the resources. For example, a database for one thousand users, with one thousand files, and five hundred access rules, occupies approximately 2 MB of disk space.

## UNIX Endpoint Requirements

The minimum requirements for a CA Access Control UNIX endpoint are:

- **Memory**—128 MB RAM (256 MB recommended)
- **Available disk space**—100 MB (150 MB for general installations)

The following table details the space required for each installation package:

Package	Space Required (MB)
Client	60
MFSD	2

Package	Space Required (MB)
Unicenter	4
API	20

In addition, you need disk space for your CA Access Control database, which is the repository of records describing your users and user groups, your protected files and other resources, and the authorizations that permit controlled access to the resources. For example, a database for one thousand users, one thousand files, and five hundred access rules, occupies approximately 2 MB of disk space.

## Policy Model Database Requirements

In addition to endpoint space requirements, you also need additional disk space for each Policy Model you plan to create on the host. Each Policy Model contains a database so you need to calculate the space requirements in the same manner as you did for your CA Access Control database.

If you are upgrading and have all your Policy Models databases (PMDBs) in place already, record the space each of the PMDBs uses in the *ACInstallDir/policies/pmdb\_name* directory before you upgrade. Use the following calculations to estimate the additional disk space you will need for upgrading each PMDB:

- *ACInstallDir/policies/pmdb\_name/subscribers.dat* (size) x 2
- *ACInstallDir/policies/pmdb\_name/updates.dat* (size) x 5 + 1000 KB

## CA Access Control Endpoint Management Requirements

The minimum requirements for the CA Access Control Endpoint Management computer are:

- **Processor**—(Windows) Pentium PC 2.66 GHz, (UNIX) SPARC Workstation 440MHz
- **Memory**—2 GB RAM
- **Available disk space**—2 GB at installation; 3 GB at %TEMP% (Windows) or /tmp (UNIX)

In addition, the CA Access Control Endpoint Management computer should have the following software installed:

- **JDK**—Java Development Kit (JDK) 1.5.0\_18 or higher
- **Application server**—JBoss Application Server version 4.2.3.GA
- **CA Access Control**—Latest version of endpoint installation

**Note:** The version of CA Access Control endpoint you install must be the same as the version of CA Access Control Endpoint Management that you plan to install.

On the end user's computer you need a minimum screen resolution of 1024 x 768 and the following as your web browser:

- **Windows**—Microsoft Internet Explorer 6.x or 7.x; or Mozilla Firefox 2.x or 3.0 or 3.5
- **Linux**—Mozilla Firefox 2.x or 3.0 or 3.5

## CA Access Control Premium Edition Enterprise Server Requirements

The minimum requirements for the Enterprise Server are:

- **Processor**— (Windows) Pentium PC 2.66 GHz; (UNIX) SPARC Workstation 440MHz
- **Memory**—2 GB RAM
- **Available disk space**—2 GB at installation directory; 3 GB at %TEMP% (Windows) or /tmp (UNIX)

In addition, the Enterprise Server should have the following software installed:

- **JDK**—Java Development Kit (JDK) 1.5.0\_18 or higher
- **Application server**—JBoss Application Server version 4.2.3.GA
- **A central database (RDBMS)**—Oracle Database 10g, Oracle Database 11g, or Microsoft SQL Server 2005

**Note:** This central database does not need to be installed on the same computer. For information about system requirements for your RDBMS, see the documentation for your product.

- **Active Directory**—(Optional) An enterprise user store.

**Note:** This user store does not need to be installed on the same computer.

- **Report Portal**—CA Business Intelligence.

**Note:** This software does not need to be installed on the same computer. For information about system requirements for the Report Portal, see the *CA Business Intelligence Installation Guide*.

**Important!** If you use Oracle Database 11g, install the BusinessObjects XI Release 2.1 SP5 patch that is available on the CA Access Control Premium Edition Report Portal (Disc 2) DVD under the \boeXIR2\_SP5 directory.

- **CA Enterprise Log Manager**—r12.0

**Note:** This software does not need to be installed on the same computer. For information about system requirements for CA Enterprise Log Manager, see the *CA Enterprise Log Manager Release Notes*.

**Note:** You can install all of the Enterprise Server components on the same computer. If you do this, you have to make sure that your operating system supports all components, and that the combined system requirements are met.

On the end user's computer you need a minimum screen resolution of 1024 x 768 and the following as your web browser:

- **Windows**—Microsoft Internet Explorer 6.x or 7.x; or Mozilla Firefox 2.x or 3.0 or 3.5
- **Linux**—Mozilla Firefox 2.x or 3.0 or 3.5

## Enterprise Reporting Requirements

If you use Oracle Database 10g or Oracle Database 11g as your central database (RDBMS), do the following before you install the CA Access Control Enterprise Management:

- Verify that the Oracle host and the CA Business Intelligence host can communicate.
- Install Oracle Client software on the CA Business Intelligence host.
- Verify that the Oracle TNS definition on the CA Business Intelligence host points to the central database.

If you use Microsoft SQL Server 2005 as your central database (RDMBS), do the following before you install the Report Server:

- Verify that the MS SQL host and the CA Business Intelligence host can communicate.

**Important!** If you use Microsoft SQL Server as the reporting database, install the Report Portal on a supported Windows operating system.



## Distribution Server Requirements

The minimum requirements for the Distribution Server computer are:

- **Processor**—Pentium PC 266 MHz
- **Memory**—2 GB RAM
- **Available disk space**—2 GB at installation; 1 GB at %TEMP% (Windows) or /tmp (UNIX)

In addition, the Distribution Server computer must have the following software installed:

- **JRE**—Java Runtime Environment (JRE) 1.4.2

## UNAB Requirements

The minimum requirements for UNAB are:

- **Memory**—128-MB RAM (256 MB recommended)
- **Available disk space**—100 MB

Also, you must have an Active Directory server configured, depending on the installation type:

- Windows Server 2000 SP4, if you have a partial integration installation
- Windows Server 2003 SP2 R2, if you have a full integration installation

Further, complete the following before you install UNAB:

- Back up the local user store.
- Install Identity Management for UNIX on the Active Directory server.  
This adds the Server for NIS and Password Synchronization server components for Active Directory.
- Synchronize the clocks between the UNIX and Active Directory computers.
- Synchronize the clocks between the Distribution Server and UNAB computers.

- Verify that the UNIX computer name resolves correctly from both the UNIX and Active Directory computers.
- (Optional) Check for UNAB system compliance to make sure the operating system you are installing on complies with its requirements.

This check runs automatically when you install UNAB

**Note:** For more information about these prerequisite tasks, see the *Implementation Guide*.

# Chapter 5: Documentation

---

This section contains the following topics:

[Guides](#) (see page 43)

[Documentation Conventions](#) (see page 43)

## Guides

The PDF guides for CA Access Control Premium Edition r12.5SP1 are as follows:

- Release Notes
- Implementation Guide
- Endpoint Administration Guide for Windows
- Endpoint Administration Guide for UNIX
- Enterprise Administration Guide
- Reference Guide
- selang Reference Guide
- Troubleshooting Guide

**Note:** To view PDF files, you must download and install a Portable Document Format (PDF) reader. The CA Access Control documentation requires Adobe Reader 7.0.7 or later. You can download Adobe Reader from the Adobe website if it is not already installed on your computer.

In addition to the PDF guides, the CA Access Control guides are also available in HTML format and Online Help is accessible from the various web-based interfaces.

## Documentation Conventions

The CA Access Control documentation uses the following conventions:

Format	Meaning
Mono-spaced font	Code or program output
<i>Italic</i>	Emphasis or a new term
<b>Bold</b>	Text that you must type exactly as shown

Format	Meaning
A forward slash (/)	Platform independent directory separator used to describe UNIX and Windows paths

The documentation also uses the following special conventions when explaining command syntax and user input (in a mono-spaced font):

Format	Meaning
<i>Italic</i>	Information that you must supply
Between square brackets ([ ])	Optional operands
Between braces ( { } )	Set of mandatory operands
Choices separated by pipe (   ).	Separates alternative operands (choose one). For example, the following means <i>either</i> a user name <i>or</i> a group name:  <i>{username groupname}</i>
...	Indicates that the preceding item or group of items can be repeated
<u>Underline</u>	Default values
A backslash at end of line preceded by a space ( \ )	Sometimes a command does not fit on a single line in this guide. In these cases, a space followed by a backslash ( \ ) at the end of a line indicates that the command continues on the following line.  <b>Note:</b> Avoid copying the backslash character and omit the line break. These are not part of the actual command syntax.

### Example: Command Notation Conventions

The following code illustrates how command conventions are used in this guide:

```
ruler className [props({all({propertyName1 [, propertyName2] ...})}]
```

In this example:

- The command name (ruler) is shown in regular mono-spaced font as it must be typed as shown.
- The *className* option is in italic as it is a placeholder for a class name (for example, USER).

- You can run the command without the second part enclosed in square brackets, which signifies optional operands.
- When using the optional parameter (props), you can choose the keyword *all* or, specify one or more property names separated by a comma.



# Chapter 6: FIPS Compliance

---

This section contains the following topics:

[FIPS Operational Modes](#) (see page 47)

[Unsupported Operating Systems for FIPS-only Mode](#) (see page 47)

[FIPS Encryption Libraries](#) (see page 47)

[FIPS Algorithms Used](#) (see page 48)

[Storage of Keys and Certificates](#) (see page 48)

[Features Affected \(UNIX\)](#) (see page 48)

[Features Affected \(Windows\)](#) (see page 50)

## FIPS Operational Modes

CA Access Control has two FIPS operational modes: FIPS-only and regular. In FIPS-only mode, CA Access Control uses only those cryptographic functions that are FIPS 140-2 compliant. This means that some CA Access Control features are disabled in FIPS-only mode. In regular mode CA Access Control uses both FIPS 140-2 cryptographic functions and non-FIPS compliant functions.

**Note:** To switch between FIPS-only mode and regular, use the *fips\_only* configuration setting in the crypto section.

## Unsupported Operating Systems for FIPS-only Mode

FIPS-only mode is not supported on the following CA Access Control supported operating system architectures:

- Linux s390
- Linux Itanium (IA64)
- Solaris x64
- Windows Itanium (IA64)

## FIPS Encryption Libraries

In FIPS-only mode CA Access Control uses the CAPKI encryption library. On UNIX systems it uses the OS encryption library for password encryption ("crypt" method). In regular mode, CA Access Control uses the CAPKI 4.0 encryption library in addition to the non-FIPS encryption libraries.

## FIPS Algorithms Used

CA Access Control components use the following cryptographic algorithms. Different components use different algorithms.

- In FIPS-only mode:
  - SSL (TLS 1.0)—client/server communication
  - AES in CBC mode—encryption of PMD update file (Windows), bidirectional password history (Windows)
  - SHA-1—Unidirectional password encryption (Windows), Trusted Programs, policy signatures (advanced policy management)
- In regular mode:
  - r8 SP1 encryption libraries (DES, Triple DES, AES, MD5, and so on)
  - SSL (SSL V2, SSL V3 and TLS 1.0)—client/server communication
  - SHA-1 (from ETPKI)—used for signatures of trusted programs, signatures of policies
  - AES (from ETPKI)—used for password validation when working with bidirectional password history

## Storage of Keys and Certificates

CA Access Control stores keys and certificates as follows.

- Symmetric keys are stored as in eTrust Access Control r8 SP1.
- Certificates (subject certificate, private key, and root certificate) are stored on the file system and protected by CA Access Control.

**Note:** CA Access Control encrypts the private key using AES symmetric encryption (from the ETPKI libraries) using CA Access Control symmetric key.

## Features Affected (UNIX)

The FIPS operational mode can have an effect on the following CA Access Control UNIX features:

Feature	Non-FIPS Mode	FIPS Mode
PMD update file encryption	Default symmetric key encryption (two-way)	Disabled
Trusted Programs	CAPKI SHA-1 and MD5	CAPKI SHA-1 only



Feature	Non-FIPS Mode	FIPS Mode
Bidirectional password encryption	Default symmetric key encryption	Disabled
Unidirectional password encryption	Operating system's crypt/bigcrypt method	Operating system's crypt/bigcrypt method
PMD TNG command	Default symmetric key encryption	Disabled
CA Access Control TNG daemon	Default symmetric key encryption	Disabled
LDAP password encryption usage (sebuildla -u -n)	Default symmetric key encryption	Disabled
LDAP password encryption generation (seldapcred)	Default symmetric key encryption	Disabled
TCP communication	Default symmetric key encryption (two-way) or CAPKI sockets over SSL V2, SSL V3, or TLS V1	CAPKI sockets over TLS V1
seversion utility	CAPKI SHA-1	CAPKI SHA-1
Trusted Programs (watchdog and sereitrust)	CAPKI SHA-1	CAPKI SHA-1
selogrd encryption	Default symmetric key encryption and MD5	Disabled
sechkey key change	Default symmetric key encryption	Disabled
iRecorder log file signature	MD5 encryption	Disabled

**Note:** Where a feature is disabled as a result of the FIPS operational mode, the relevant program prints an error message and exits.

## Features Affected (Windows)

The FIPS operational mode can have an effect on the following CA Access Control Windows features:

Feature	Non-FIPS Mode	FIPS Mode
PMD update file encryption	Default symmetric key encryption (two-way)	CAPKI AES symmetric key encryption
Password history (non-bidirectional)	Saved as CAPKI SHA-1. Password validation with CAPKI SHA-1 and fall through to crypt	Saved as CAPKI SHA-1. Password validation with CAPKI SHA-1 only
Password history (bidirectional)	Default symmetric key encryption. Password validation with default symmetric key encryption	CAPKI AES symmetric key encryption. Password validation with CAPKI AES only.
sechkey key change, password history	Default symmetric key encryption to decrypt and encrypt password history	CAPKI AES symmetric key encryption to decrypt and encrypt password history
sechkey key change, policy model	Default symmetric key encryption to decrypt and encrypt policy model update files	CAPKI AES symmetric key encryption to decrypt and encrypt policy model update files
Trusted Programs	CAPKI SHA-1 and MD5	CAPKI SHA-1 only
Mainframe password synchronization	Enabled	Disabled
iRecorder	Enabled	Disabled
TNG integartion	Enabled	Disabled
Advanced policy management policy distribution	CAPKI SHA-1 signature, and for backwards compatibility, CA Access Control internal SHA-1 signature	CAPKI SHA-1 signature only

**Note:** Where a feature is disabled as a result of the FIPS operational mode, the relevant program prints an error message and exits.

You should also consider the following:

- When moving from non-FIPS to FIPS, the policy model *cannot* read old commands.
- When moving from FIPS to non-FIPS, the policy model *can* read old commands.
- For non-bidirectional password history, there is no impact when not using crypt in FIPS mode. Crypt is only for backwards compatibility.
- For bidirectional password history, moving from non-FIPS to FIPS, CA Access Control cannot decrypt old passwords.



# Chapter 7: Considerations and Known Issues

---

This section contains the following topics:

[Windows Endpoint Considerations](#) (see page 53)

[Windows Endpoint Known Issues](#) (see page 65)

[UNIX Endpoint Considerations](#) (see page 67)

[UNIX Endpoint Known Issues](#) (see page 78)

[UNAB Considerations](#) (see page 84)

[UNAB Known Issues](#) (see page 86)

[Server Components Considerations](#) (see page 89)

[Server Components Known Issues](#) (see page 101)

[Documentation Known Issues](#) (see page 111)

## Windows Endpoint Considerations

This section describes items you should consider when using CA Access Control on Windows endpoints.

### Versions You Can Upgrade From

You can upgrade to CA Access Control r12.5SP1 for Windows from r12.5, r12.0, r12.0 SP1, and r8 SP1 (only from a CR release, not from the base version).

### CA Access Control r12.5 SP1 Endpoint Requires a Hot Fix to Manage Policy Models on CA Access Control r12.5 and r12.0 SP1

If you want to use an CA Access Control r12.5 endpoint to manage policy models on r12.5 and r12.0 SP1 endpoints, you must install a hot fix on the r12.5 and r12.0 SP1 endpoints.

**Note:** For assistance, contact Technical Support at <http://ca.com/support>.

## Reboot May Be Required When Upgrading

When you upgrade an endpoint from r12.0 SP1 or r12.5 to r12.5 SP1, it is not mandatory that you reboot the computer. After the upgrade, CA Access Control preserves backwards compatibility. However, the upgrade is not complete until you reboot the computer, and all r12.5 SP1 functionality may not be supported until after the reboot.

When you upgrade an r8.0 SP1 or r12.0 endpoint to r12.5 SP1, you must reboot the computer.

## x64 Feature Support Limitations

The following are known limitations on Windows 2003 x64:

- Unicenter TNG migration and integration
- Mainframe password synchronization
- Process interception (class PROCESS functionality)
- Impersonation interception (class SURROGATE functionality), if SurrogateInterceptionMode is set to 1

**Important!** Impersonation interception is supported on x64 and x86 platforms by default via the RunAs plug-in (SurrogateInterceptionMode is set to 0).

**Note:** For more information about the SurrogateInterceptionMode registry setting, see the *Reference Guide*.

## Short File Name Rules (8.3 Format) Are Not Supported

CA Access Control r12.5SP1 does not support rules created as short file names (8.3 format). When you define any of the following classes, you must enter the full path name of the file or directory:

- FILE
- PROGRAM
- PROCESS

- SECFILE
- SPECIALPGM

The following is an example of a rule using a full path name:

```
nr file ("C:\program files\text.txt")
```

The following is an example of a rule using a short path name that is *not* supported:

```
nr file ("C:\progra~1\test.txt")
```

## IPv6 Support

CA Access Control runs in an IPv4-only environment, an IPv6-only environment, or a mixed environment of both IPv4 and IPv6.

**Note:** selogrd and selogrcd will not work in IPv6-only environments.

CA Access Control does not currently support network access controls on IPv6 networks. This affects the HOST, CONNECT and TCP classes.

You can specify IP addresses to CA Access Control in IPv6 format, except that the mask and match feature of HOSTNET class records requires IPv4 format addresses.

## McAfee Intercept Buffer Overflow

The CA Access Control STOP feature is incompatible with the McAfee Intercept buffer overflow technology.

Turn off the CA Access Control STOP feature or the McAfee Intercept buffer overflow protection feature.

## Supported Installation Languages

When you install CA Access Control silently, you can specify the language in which CA Access Control is installed. The following are the supported language IDs you can specify and their respective languages:

- 1033—English
- 1041—Japanese
- 1042—Korean

## CA Access Control Backdoor

During the evaluation phase, rules may be incorrectly defined. Incorrectly defined rules can prevent users from logging in or executing commands. For example, a rule that denies access to the system directory or vital parts of the Windows registry. Because it is difficult to stop CA Access Control and fix these mistakes, CA Access Control comes with a backdoor that lets you fix these types of problem. Because backdoors can be maliciously exploited, CA Access Control also lets you disable this backdoor once your system is set up and stable.

To access this backdoor, select Safe Mode or Safe Mode with Networking from the boot menu. When you select one of these options the system starts without automatically starting the CA Access Control services.

To disable this backdoor, define the registry value 'LockEE' of data type reg\_dword under the registry key  
HKEY\_LOCAL\_MACHINE\Software\ComputerAssociates\  
AccessControl\AccessControl\ and set it to 1.

**Note:** This registry value does not exist by default.

Now when you start the system with LockEE set to 1 in:

- Safe Mode, only CA Access Control Engine and CA Access Control Watchdog load.  
  
The CA Access Control Agent (and any Policy Models), which rely on network services, do not load.
- Safe Mode with Networking, CA Access Control starts normally.



## CA Access Control Database Size Limitation

The CA Access Control database is limited to one million (1,000,000) objects. This size limitation is only likely to affect your deployment if you use advanced policy management in a large environment.

If the CA Access Control database in your enterprise is expected to hold 1,000,000 objects, you need to remove old DEPLOYMENT objects that are no longer in use.

### **Example: Calculating the Number of Objects in the CA Access Control Database**

The following example shows you how to calculate the number of objects that you can expect to have in the DMS-the central CA Access Control management database.

In this example, we have an enterprise deployment of CA Access Control on 5000 endpoints, each holding 50 assigned policies. As a result, the DMS contains at least 250,000 objects, as follows:

$5,000 \text{ endpoints} \times 50 \text{ policies} = 250,000 \text{ DEPLOYMENT objects}$

If over time you create four versions of each policy, and assign these policies to each of your 5000 endpoints, the number of objects in the DMS will reach the 1,000,000 objects limit, as follows:

$5,000 \text{ endpoints} \times 50 \text{ policies} \times 4 \text{ version} = 1,000,000 \text{ DEPLOYMENT objects}$

## CA Access Control Generates the Login Session ID

CA Access Control generates at startup the login session ID that it adds to audit log records. This means that a logged on user gets a different session ID within the same terminal session every time CA Access Control restarts. The session ID remains the same only within the same CA Access Control session.

## Conflicts with Other Software in Databases You Create

To avoid conflicts between CA Access Control and other products, CA Access Control provides a coexistence utility that detects and defines special rules for any such software found. When you create a new CA Access Control database using dbmgr, we highly recommended you issue the command with the additional `-k` switch. This switch creates the database with special coexistence rules.

Alternatively, run the coexistence utility separately after you create the database. From the CA Access Control Bin directory, issue the command:

```
eACoexist.exe ACInstallDir\Coexistence
```

## Mainframe Password Synchronization Prerequisite

To work with Mainframe Password Synchronization on the server that has TNG/TND/NSM installed, CA Access Control requires a prerequisite TNG/TND/NSM fix - T129430. Please contact support for getting the fix.

## Firewall Settings

When you install CA Access Control on Windows Server 2003, or Windows Server 2008, CA Access Control opens port 8891 for non-SSL TCP connections and port 5249 for SSL TCP connections. This serves as the default port for CA Access Control agent-client connections.

**Note:** For more information on ports CA Access Control uses on Windows, see the *Reference Guide*.

## IA64 Feature Support Limitations

The following features are not supported on IA64 platforms:

- Unicenter TNG migration and integration
- Mainframe password synchronization
- STOP
- Report Agent
- PUPM Agent
- SSL
- FIPS 140-2 compliance

## Windows Server 2008 Feature Support Limitations

The following are known limitations on Windows Server 2008:

- Impersonation interception (class SURROGATE functionality), if SurrogateInterceptionMode is set to 1

**Important!** Impersonation interception is supported on x64 and x86 platforms by default via the RunAs plug-in (SurrogateInterceptionMode is set to 0).

**Note:** For more information about the SurrogateInterceptionMode registry setting, see the *Reference Guide*.

## TCP and SURROGATE Class Are Not Active By Default

CA Access Control database classes TCP and SURROGATE are not active by default.

If you upgrade from an earlier release where the TCP class is active but you do not have any TCP records and have not changed the \_default TCP resource, CA Access Control deactivates the class during upgrade. The same is true for the SURROGATE class.

If you upgrade from an earlier release where the SURROGATE class is active and you have defined SURROGATE records or have changed the value of any SURROGATE record from its default, CA Access Control retains the SURROGATE class configuration after the upgrade. The class remains active and kernel mode interception remains enabled.

## Enterprise Users Do Not Correspond to the \_undefined User

If you use enterprise users (osuser\_enabled is set to 1), CA Access Control does not consider any user as undefined.

Rules for the \_undefined user are not relevant in this case.

## Policy Model Names Are Case-sensitive

Policy Model names are case-sensitive on Windows for compatibility with UNIX. When specifying PMDB names in commands, make sure you use the correct case.

**Note:** Although PMDB names are case-sensitive, you cannot have two PMDBs on the same computer with only the letter case being different. This is because CA Access Control uses the PMDB name as part of the file path but Windows is case-insensitive and so does not permit this. For example, myPMDb and MYpmdb are two different Policy Model databases but cannot live on the same system.

## seaudit Displays Trace Records by User Name

The seaudit utility displays trace records by user name, not by user ID.

**Note:** You can choose to revert the seaudit utility output to the way it was in a previous release using the -format option. For more information, see the *Reference Guide*.

## Process Creation Trace Limitations

- CA Access Control traces process creation in Windows. However, seosd fetches new process arguments and writes the arguments to the general trace only if the user who started the process is marked to be traced.
- When a new process is created, its arguments may not be available until the process finishes initialization. seosd attempts to trace the process arguments asynchronously; however if the process is very short, the process may terminate before seosd can fetch the process arguments and write them to the trace. In this case the following message appears in the trace:

EXECARGS: Not available (87)

- Process IDs are reused in Windows. If a process is very short, it is theoretically possible that seosd will fetch process arguments for a different process that acquired the same process ID, and write these arguments to the trace.

## PMDB and Host Names Do Not Support Non-English Characters

You cannot use non-English characters in PMDB and host names.

## Password Propagation Requires a Restart When You Change Encryption Modes

When you change the encryption mode (for example, to FIPS-only mode), you must restart CA Access Control services if you need to propagate passwords from a password PMDB.

## Authorization Recognizes Resource Group Ownership

CA Access Control takes into account resource group ownership when checking user authorization to a resource. This behavior was introduced in r12.0. In earlier releases, the authorization process considered only the resource's owner.

For example, you define a FILE resource with a default access of none and no owner that is a member to a GFILE resource with a named owner. In CA Access Control r12.0 and later, the named group owner has full access to the file. In earlier releases, nobody has access to the file.

## Non-IPv4 telnet Connections Are Not Secured on Windows Server 2008

On Windows Server 2008, CA Access Control cannot secure a telnet connection unless it uses IPv4.

To protect a localhost telnet connection—telnet from the localhost to the localhost—on Windows Server 2008, you need to modify the `/etc/HOSTS` file as follows:

```
127.0.0.1    localhost
#   ::1      localhost
127.0.0.1    <your server name without domain suffix>
```

The above configuration works around this issue on an IPv4 domain. If your computer is on an IPv6 domain, you need to add the following line:

```
127.0.0.1    <your server name with domain suffix>
```

## Login Interception is Supported by Sub-authentication Method Only

Login interception on Windows is supported only by CA Access Control sub-authentication method.

You cannot set login interception through the kernel. As a result, you should consider the following:

- Since the sub-authentication component works on the Domain Controller (DC) level, and it is up to the OS to decide which DC authenticates the user's login events (and triggers the CA Access Control sub-authentication module), in a Windows domain environment, CA Access Control needs to be installed on every DC.
- When working in a Windows domain environment, CA Access Control login policy (TERMINAL rules) need to be located on the DCs and not necessarily on the target server.

For example, if you would like to protect or audit login events made by domain users on a file server, which is part of the Windows domain but is not a DC, the CA Access Control login policy needs to be defined on the DC and not on the target file server. This is because when a domain user accesses the shared file directory, a login authorization occurs on the DC, not the file server.

- When there is more than one DC, CA Access Control login authorization could be processed on any one of the DCs. As a result, we recommended you synchronize CA Access Control login policy between all DCs.

You can implement this through either the Policy Model mechanism, where all DCs are subscribers to a PMDB, or by adding all DCs into a host group and deploying a common policy using advanced policy management.

- Some user properties, which correspond to login events, are updated at runtime-during event authorization. These properties might be out-of-sync because the login authorization happens only on one of the DCs. These properties are *Gracelogins*, *Last accessed*, and *Last access time*.

That said, it is possible that, for example, the user's property *Last access time* value will be different between DCs because CA Access Control sub-authentication was triggered on one of the DCs, not on all of them.

- To enforce local users (that is, not domain users) login events, CA Access Control needs to be installed on the local computer that the local user needs access to. This is because the local computer is used as the domain computer (the domain is the local computer).
- Remote Desktop Protocol (RDP)/Terminal Services login events are enforced on the target server as it was in previous CA Access Control versions. However, for RDP login events, CA Access Control login policy should be defined on the target server.

## Policy Manager Interface Discontinued

Policy Manager is not included in r12.0 and later releases. The web-based CA Access Control Endpoint Management replaces this interface. The r8 SP1 Policy Manager is upward compatible with new CA Access Control endpoints. However, it supports pre-r12.0 features only.

## Audit Log Backup Files Are Protected by Default

By default, CA Access Control protects audit log backup files if you configure settings to keep timestamped backups. This is the same default protection that the size-triggered audit backup file receives. To remove these files, you need to set permissive rules in the database.

## Cannot Define Record In SPECIALPGM Class for Incoming Network Interception Events

You cannot define a record in the SPECIALPGM class for incoming network interception events. This is because the incoming network interception event does not have a process name in this context. To bypass writing an audit record for the interception event, set the AUDIT property to NONE for the corresponding record in the TCP class.

## Change to Default Audit Value for Some Users

Before r12.0 SP1 CR1, the default audit mode was None for the following accessors:

- Users that do not have a defined AUDIT value in their corresponding USER class record, and that are not associated with a profile group that has a defined AUDIT value.
- Any user that is not defined in the database (represented by the \_undefined user record).

**Note:** If you use enterprise users, CA Access Control does not consider any users as undefined. Properties of the \_undefined user are not relevant in this case.

From r12.0 SP1 CR1, the default audit mode for these accessors is Failure, LoginSuccess, and LoginFailure. To retain earlier behavior, set the value of the AUDIT property to None for these users.

## Change to Value of AUDIT Property for GROUP Records

If you have a GROUP record that has two functions:

- A profile that defines an audit policy for one set of users
- A container for a second set of users

From r12.0 SP1 CR1 onwards, the GROUP record also defines the audit policy for the second set of users. To avoid problems that this behavior change may cause, create a separate GROUP for the second set of users.

## SAN Support

CA Access Control supports a SAN (storage area network) environment when you install CA Access Control on:

- A local file system and use it to protect files on a SAN, when the SAN is accessible from a single host.

**Note:** If the SAN is accessible from multiple hosts, install CA Access Control on each host that can access the SAN and use each installation to protect files on the SAN.

- A SAN disk, subject to the following limitations:
  - CA Access Control drivers must be installed on the local file system.
  - You must manually start CA Access Control on the SAN disk each time you start or restart the computer. Do not start CA Access Control automatically when you start or restart the computer.

**Note:** The previous condition only applies when you install CA Access Control on a SAN disk. If you install CA Access Control on a local file system and use it to protect files on a SAN, you do *not* need to manually start CA Access Control each time you restart the computer.

If the SAN is accessible from multiple hosts and CA Access Control is installed on the SAN, and you want to install CA Access Control from a different host to the same location on the SAN, consider the following before you begin:

- The new installation of CA Access Control replaces the existing installation of CA Access Control and overwrites the existing CA Access Control configuration files and database.
- You must stop the existing installation of CA Access Control before you begin the new installation.



## **Restart Message Pops Up During Installation, Uninstallation, or Upgrade on Windows Server 2008**

When you install, uninstall or upgrade CA Access Control on Windows Server 2008, a dialog box may appear informing you that a restart is required after the process is complete. To continue, close the dialog box by selecting OK.

## **PUPM Agent Programmable Check Out Requires Case Sensitive Host Name**

When using PUPM Agent programmable check-out (Application to Application) command-line interface, verify that you use case-sensitive host name.

## **Upgrades from r8 SP1 GA Are Not Supported**

Upgrading from eTrust Access Control r8 SP1 GA version is not supported. Upgrade is supported from any r8 SP1 CR, starting with the initial r8 SP1 CR: "September 2006 - Q083379".

Install an r8 SP1 CR before you upgrade.

## **Upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3 Is Not Supported**

You cannot upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3. To upgrade to CA Access Control r12.5, we recommend that you first install CA Access Control r8.0 SP1 CR1 and then install CA Access Control r12.5 SP1.

## **Uninstall Does Not Remove CA License Files**

When you uninstall CA Access Control, the CA License files are not deleted. By default, the CA License files are in the CA\_license directory (for example, C:\Program Files\CA\SharedComponents\CA\_LIC).

# **Windows Endpoint Known Issues**

This section describes known issues for CA Access Control for Windows.

## **Cannot Import Windows Native Users and Groups During Installation**

You cannot import Windows native users and groups into the CA Access Control database during installation. To work around the problem, run the NTImport.exe utility after the installation completes.

## **"Insufficient Privileges to Modify File" Message Appears During Upgrade**

If you upgrade a CA Access Control endpoint and a message appears that informs you that the installer has insufficient privileges to modify a file, acknowledge the message and continue with the upgrade.

## **SPECIALPGM Rule Not Removed from CA Access Control Database After Silent Upgrade**

After running a silent upgrade of a CA Access Control endpoint, a SPECIALPGM rule for bypassing msixexec.exe is not removed from the database. To remove the rule, create a selang script or action that removes the rule from the database after the upgrade process is complete.

## **PUPM Agent Application to Application Fails to Change Provisioning Account Passwords**

Currently, you cannot use the PUPM agent application to application capability to change account passwords that are defined on CA Identity Manager provisioning.

## **Privileged Processes Can Save and Restore a Registry Tree Without Authorization**

On Window Server 2003 and later, when a process obtains the special privileges SE\_BACKUP\_NAME and SE\_RESTORE\_NAME, it can save and restore a registry tree without CA Access Control authorization.

## **IA64 and x64 Architectures: Cannot Install a Prerequisite in Silent Mode**

CA Access Control installation cannot install the prerequisite Microsoft Visual C++ 2005 Redistributable Package in silent mode on x64 and Itanium (IA64) architectures. To work around this issue, install the Microsoft Visual C++ 2005 Redistributable Package before you start a silent installation of CA Access Control on these architectures.

## FIPS Only Mode on Windows x64

CAPKI 4.1.2 is now supported on x64 CA Access Control endpoint for Windows. However, due to a known issue with RSA, when running the CAPKI 4.1.2 in FIPS enabled mode, communication is significantly delayed.

## UNIX Endpoint Considerations

This section describes items you should consider when using CA Access Control on UNIX endpoints.

### Default Installation Location

The default installation location has changed in r12.0 and is as follows:

```
/opt/CA/AccessControl
```

### Versions You Can Upgrade From

You can upgrade to CA Access Control r12.5 SP1 for UNIX from r12.0 SP1, r12.0, and r8 SP1.

### CA Access Control for Linux390 Requires Java Version 1.5 and Above

To install CA Access Control for Linux390, verify that Java version 1.5 and above is installed on the endpoint and that the Java\_Lib\_Path token in accommon.ini specifies the full pathname of the installed version.

### CA Access Control Restarts UNAB When Installed and Uninstalled

#### **Valid on AIX**

When CA Access Control is installed or uninstalled from an endpoint that UNAB is running on, the UNAB agent, uxauthd, is stopped and started.

## Configure PAM to Work on AIX

When you use PAM to authenticate users for CA Access Control purposes (auth\_login = pam), CA Access Control needs to use the PAM API library.

AIX does not provide the PAM library in a shared library format that CA Access Control can easily link to. When CA Access Control attempts to use the PAM API it fails with an error "cannot find /usr/lib/libpam.o".

### To configure PAM to work on AIX

1. Locate the AIX supplied *libpam.a* archive:

```
cd /usr/lib
```

This archive contains the AIX PAM shared library (shr.o).

2. Extract shr.o from libpam.a to /usr/lib:

```
ar -xv libpam.a
```

3. Rename shr.o to libpam.o:

```
mv shr.o libpam.o
```

## Linux Kernel Recompilation

On Linux, if you recompile your kernel, you must copy the system.map file to the /boot directory to load the CA Access Control daemons.

## Streams Module Is Not Active by Default

By default, the TCP, CONNECT, and HOST classes are not active and the CA Access Control kernel module is not loaded into streams. Before you activate any of these classes, be sure that the streams module is enabled for network interception.

**Note:** Streams module is only available for systems that support streams.

## PDF Documentation Requires Adobe Reader 7.0.7

To read the documentation for CA Access Control in print format (PDF files), you must install Adobe Reader 7.0.7 or later. You can download Adobe Reader from the Adobe website if it is not already installed on your computer.

**Note:** Adobe Reader is not available on HP-UX Itanium (IA64) and Red Hat Linux Itanium IA64.

## Some Utilities Require That You Start The Kernel

You must load the CA Access Control kernel module for some utilities to use the CA Access Control kernel interface. These utilities include `selogrd` and `selogrcd` on most platforms.

## RENAME Authority Depends on READ Authority on a 2.4 Kernel RHEL

On Red Hat Linux computers with a 2.4 kernel, to deny the RENAME authority you must also deny the READ authority.

## SNMP Extension of `selogrd` Requires a Variable for a Non-Default Installation Path

If you want to use the SNMP extension of `selogrd`, and CA Access Control is not installed in the default location (`/opt/CA/AccessControl`), you must set an environment variable before running `selogrd`. The environment variables are as follows:

- In AIX, set `LIBPATH` to *ACInstallDir/lib*
- In Solaris, set `LD_LIBRARY_PATH` to *ACInstallDir/lib*
- In LINUX, set `LD_LIBRARY_PATH` to *ACInstallDir/lib*
- In HP, set `SHLIB_PATH` to *ACInstallDir/lib*

*ACInstallDir* is the directory where you installed CA Access Control.

## Access to SSH Failed Login Attempts Requires PAM Configuration

To obtain failed login events from SSH, the SSH version you are using must be compiled and configured to support PAM.

If your version of SSH does not use PAM, CA Access Control cannot detect whether a user has violated the failed login rules.

## PAM Configuration for CA Access Control Features

CA Access Control PAM features that rely on identifying user login attempts (for example, `segrace`, `serevu`, and log audit records) do not work if the line "auth requisite" appears before the CA Access Control line "auth optional *pam\_module*" in the operating system's PAM configuration file.

If you want PAM to write user login attempts, the PAM configuration file should contain the line "auth required *pam\_module*" instead of "auth requisite *pam\_module*". If you specify the control-flag *required* and the module fails, it continues to next module. If you use the control-flag *requisite* and the module fails, it exits immediately and does not reach the CA Access Control line and so *pam\_module* does not run.

**Note:** *pam\_module* is the name of the PAM module file on your platform. For example, on Linux, this is `pam_unix2.so`.

## Lookaside Database Creation from LDAP DIT Requirements

To add information from the LDAP Directory Information Tree (DIT) to the user lookaside database that `sebuildla` creates (`-n` option), the computer must have LDAP v3 run-time support.

## telnet and rsh Require Specific PAM Configuration

You cannot use telnet or rsh to log in to a computer if your PAM configuration file:

- Is missing the following operating system's line:

```
login account optional /usr/lib/security/libpam_unix.1
```

- Has the following CA Access Control line:

```
login account optional /usr/lib/security/pam_seos.sl
```

To fix this, comment out the CA Access Control line if you want PAM to use the "OTHERaccount..." line instead, or uncomment the operating system's line.

## SNMP Configuration

When you set `selogrd` to route audit records to SNMP listeners, you can use an SNMP community name that is different from the default name ("public"). To do this, use the following format in the `selogrd.cfg` configuration file:

```
snmp gateway@community
```

### **gateway**

Defines the SNMP gateway host name.

### **community**

Defines the SNMP community name that matches the target SNMP environment.

## syslog Messages That Have a Reduced Priority

The following syslog messages have been reduced to informational priority (INFO) rather than ERROR):

- CA Access Control daemon going down.
- START-UP: CA Access Control PID=%d
- SEOS\_load: use\_streams=\$use\_streams unload\_enable=\$unload\_enable
- Loading CA Access Control kernel extension.
- \$prodname kernel extension is already loaded.
- Starting \$SeosBinDir/seosd daemon. (CA Access Control)
- Watchdog started.
- Watchdog initialized Watchdog extensions.

## syslog Messages Are Affected by the Product Name Change

syslog messages have been affected by the CA Access Control name change in r12.0.

Where messages contained the "eTrust AC" string before, they now contain the "CA Access Control" string.

## Enterprise Users Do Not Correspond to the `_undefined` User

If you use enterprise users (`osuser_enabled` is set to 1), CA Access Control does not consider any user as undefined.

Rules for the `_undefined` user are not relevant in this case.

## The All Users Mask (\*) Applies to Users That Are Not Defined

If you do not use enterprise users (`osuser_enabled` is set to 0), users that are not defined in the CA Access Control database are included in rules that apply to all users (using the mask `*`).

If you want to exclude undefined users from rules that apply to all users, create a more specific rule for the `_undefined` user that defines the required access to users that are not defined in the database.

## serevu Configuration

If you want to work with `serevu`, and `root` does not have the ADMIN attribute or terminal access to the local database, you should define the following:

```
eu _serevu admin logical
authorize terminal localTerminalName uid(_serevu) access(a)
er specialpgm $ACDIR/bin/serevu seosuid(_serevu) unixuid(root)
```

## serevu Configuration for Working with a Policy Model

If you want `serevu` to send commands to the PMD (which, you can configure in `serevu.cfg`) and `root` is not defined on the PMD with the ADMIN attribute or with terminal access, you should define the following on the PMD and all of its subscribers:

```
eu _serevu logical
authorize admin USER uid(_serevu) access(a)
# The following line can be executed on the master PMD only
authorize terminal localTerminalName uid(_serevu) access(a)
```

## Compiling API Samples

You should use `gmake` (GNU make) and not `make` to compile the API samples.



## Compatibility Library Missing on x86\_64bit Linux

By default x86\_64 Linux operating systems are not installed with the 32bit compatibility libraries. CA Access Control endpoint requires that the library `libstdc++.so.6` exists under the `usr/lib` directory.

Verify that this library exists on the endpoint before you install CA Access Control.

## FIPS 140-2 Library Upgrade

CA Access Control r12.5 SP1 uses CAPKI 4.1 instead of ETPKI 3.2. The upgrade is automatic and keeps the ETPKI 3.2 libraries on your computer if they are used by other components. To determine whether other components are using ETPKI 3.2, CAPKI uses an internal reference count. When this count equals 0, ETPKI 3.2 uninstalls on upgrade.

CAPKI 4.1 provides a static library (`libcapki_stub.lib` for Windows, `libcapki_stub.a` for UNIX) that acts as a stub for the CAPKI interface and removes the need to dynamically load the library.

### **More information:**

[FIPS Operational Modes](#) (see page 47)

## Authorization Recognizes Resource Group Ownership

CA Access Control takes into account resource group ownership when checking user authorization to a resource. This behavior was introduced in r12.0. In earlier releases, the authorization process considered only the resource's owner.

For example, you define a FILE resource with a default access of none and no owner that is a member to a GFILE resource with a named owner. In CA Access Control r12.0 and later, the named group owner has full access to the file. In earlier releases, nobody has access to the file.

## Unicenter Integration is Not Supported on HP-UX Itanium and RHEL Itanium

Unicenter integration is not supported on HP-UX Itanium (IA64) and Red Hat Linux Itanium IA64.

## CA Access Control Generates the Login Session ID

CA Access Control generates at startup the login session ID that it adds to audit log records. This means that a logged on user gets a different session ID within the same terminal session every time CA Access Control restarts. The session ID remains the same only within the same CA Access Control session.

## Policy Manager Interface Discontinued

Policy Manager is not included in r12.0 and later releases. The web-based CA Access Control Endpoint Management replaces this interface. The r8 SP1 Policy Manager is upward compatible with new CA Access Control endpoints. However, it supports pre-r12.0 features only.

## Propagating CA Access Control and UNAB to a New Solaris Zone

When you setup a new Solaris zone, there are several post installation steps you must complete before you can propagate CA Access Control and UNAB to the new zone.

**Note:** For more information on setting up a new zone correctly, see Sun's System Administration Guide: Solaris Containers--Resource Management and Solaris Zones, which is available at the [Sun Microsystems Documentation website](#).

## Security Administrator Discontinued

The Security Administrator Motif interface is not included in r12.0 and later releases. The web-based CA Access Control Endpoint Management replaces this interface. The r8 SP1 Security Administrator is upward compatible with new CA Access Control endpoints. However, it supports pre-r12.0 features only.

**Note:** As the Security Administrator is not provided, the CAeACGUI native package is not supplied. Also, the -admin option of the install\_base script is no longer available.

## Audit Log Backup Files Are Protected by Default

By default, CA Access Control protects audit log backup files if you configure settings to keep timestamped backups. This is the same default protection that the size-triggered audit backup file receives. To remove these files, you need to set permissive rules in the database.

## Report Agent and PUPM Agent Are Not Supported on Linux IA64

The Report Agent daemon and the PUPM Agent are not supported on Linux Itanium (IA64). CA Access Control does not install the Report Agent and the PUPM Agent on these operating systems regardless of the selections you make during installation.

## Change Encryption Key After You Patch libcryptscr.so.125.0

The symmetric encryption key is embedded in the libcryptscr.so.125.0 library. If you patch this library, the patch may restore the default CA Access Control encryption key. To avoid communication problems, you must always change the encryption key immediately after you apply a patch to libcryptscr.so.125.0.

To change the key, navigate to `/opt/CA/AccessControl/lib/libcryptscr.so.125.0` and run `sechkey` as follows, where *previous\_key* is the encryption key that you used before the patch:

```
sechkey -d previous_key
```

`sechkey` replaces the default encryption key with the previous key.

## Systemwide Audit Mode for UNIX Upgrades

The `SYSTEM_AAUDIT_MODE` property in the SEOS class specifies the default audit mode for users and enterprise users (systemwide audit mode). When you upgrade to CA Access Control r12.5 SP1, CA Access Control sets the value of the `SYSTEM_AAUDIT_MODE` property to the value of the DefaultAudit configuration setting in the [newusr] section of the lang.ini file.

**Note:** The default value of both the `SYSTEM_AAUDIT_MODE` property and the DefaultAudit configuration setting is Failure LoginSuccess LoginFailure.

## Change to Default Audit Value for Some Users

Before r12.0 SP1 CR1, the default audit mode was None for the following accessors:

- Users that do not have a defined AUDIT value in their corresponding USER class record, and that are not associated with a profile group that has a defined AUDIT value.
- Any user that is not defined in the database (represented by the `_undefined` user record).

**Note:** If you use enterprise users, CA Access Control does not consider any users as undefined. Properties of the `_undefined` user are not relevant in this case.

From r12.0 SP1 CR1, the default audit mode for these accessors is Failure, LoginSuccess, and LoginFailure. To retain earlier behavior, set the value of the AUDIT property to None for these users.

## Change to Value of AUDIT Property for GROUP Records

If you have a GROUP record that has two functions:

- A profile that defines an audit policy for one set of users
- A container for a second set of users

From r12.0 SP1 CR1 onwards, the GROUP record also defines the audit policy for the second set of users. To avoid problems that this behavior change may cause, create a separate GROUP for the second set of users.

## SAN Support

CA Access Control supports a SAN (storage area network) environment when you install CA Access Control on a local file system and use it to protect files on a SAN, when the SAN is accessible from the single host where CA Access Control is installed.

**Note:** If the SAN is accessible from multiple hosts, install CA Access Control on each host that can access the SAN and use each installation to protect files on the SAN.

If the SAN is accessible from multiple hosts and CA Access Control is installed on the SAN, and you want to install CA Access Control from a different host to the same location on the SAN, consider the following before you begin:

- The new installation of CA Access Control replaces the existing installation of CA Access Control and overwrites the existing CA Access Control configuration files and database.
- You must stop the existing installation of CA Access Control before you begin the new installation.

**Note:** CA Access Control behavior is unspecified when you install it on a SAN and it is executed from multiple connected hosts.

## IPv6 Support

CA Access Control runs in an IPv4-only environment, an IPv6-only environment, or a mixed environment of both IPv4 and IPv6.

**Note:** selogrd and selogrcd will not work in IPv6-only environments.

CA Access Control does not currently support network access controls on IPv6 networks. This affects the HOST, CONNECT and TCP classes.

You can specify IP addresses to CA Access Control in IPv6 format, except that the mask and match feature of HOSTNET class records requires IPv4 format addresses.

## Upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3 Is Not Supported

You cannot upgrade to CA Access Control r12.5 SP1 from CA Access Control r5.3. To upgrade to CA Access Control r12.5, we recommend that you first install CA Access Control r8.0 SP1 CR1 and then install CA Access Control r12.5 SP1.

## UNIX Endpoint Known Issues

This section describes known issues for CA Access Control for UNIX.

### CA Access Control Fails to Start on SLES 11x86\_64

If you use CA Access Control on SLES11 x86\_64, you must install a kernel hardware patch. Verify that you use the following kernel patch file or later:

`kernel-default-base-2.6.27.21-0.1.2.x86_64.rpm`

To enable CA Access Control to run on SLES11 x86\_64, install the kernel patch, restart the system, and start CA Access Control.

### Report Agent Multi-Threading is Not Supported on Linux Z-series (s390x)

The Report Agent multi-threading capability is not supported on Linux Z-series (s390x). Working in a single thread mode prevents the Report Agent from performing multiple tasks concurrently. To generate CA Access Control or UNAB reports or to send auditing information to CA Enterprise Log Manager, specify the tasks that the Report Agent performs when activated.

To run the Report Agent, configure the Report Agent daemon using the `report_agent.sh` script.

**Note:** For more information about the `report_agent.sh` script, see the *Reference Guide*.

**Important!** If you configure the Report Agent to run as a daemon, specify the tasks that the agent performs when activated. If the Report Agent runs without specified tasks, the CA Enterprise Log Manager tasks (1,3) are not supported.

Alternatively, you can manually run the Report Agent to collect reporting data and send the information to the CA Access Control Enterprise Management Server.

To run the Report Agent, open a command line window and run the following command:

```
./ReportAgent -now -task[0,1,2,3]
```

**-now**

Specifies that the Report Agent starts as soon as you execute the command.

**-task[0,1,2,3]**

Specifies the action that the Report Agent performs. Valid values are:

- 0—If CA Access Control is installed on the endpoint, the Report Agent collects and sends reporting data to the CA Access Control Enterprise Management Server.
- 1—If CA Access Control is installed on the endpoint, the Report Agent collects and sends data to CA Enterprise Log Manager.
- 2—If UNAB is installed on the endpoint, the Report Agent collects and send reporting data to the CA Access Control Enterprise Management Server.
- 3—If UNAB id installed on the endpoint, the Report Agent connects and sends data to CA Enterprise Log Manager.

**Important!** If CA Access Control is installed on the endpoint, the Report Agent collects and sends only CA Access Control data to the CA Access Control Enterprise Management Server. If UNAB is installed on the endpoint, the Report Agent collects and sends data to the CA Access Control Enterprise Management Server only if CA Access Control is *not* installed.

**Note:** Verify that you configured the Java libraries \$JAVAHOME/bin and \$JAVAHOME/bin/classic settings.

## Change LOGINFLAGS Value to NONE If UNAB is Installed on an CA Access Control Endpoint

When UNAB runs on an CA Access Control endpoint, the UNAB PAM SSH hook precedes that of CA Access Control. Therefore, the CA Access Control PAM SSH hook is not invoked for SSH login and thus SSH logins are not processed by CA Access Control. To work around this issue, set the SSH LOGINAPPL flag to None to avoid using PAM for CA Access Control login processing.

## Upgrade from CA Access Control r12.5 Using Native Packages Fails on Linux Kernel 2.4

When upgrading CA Access Control r12.5 using native packages (RPM) on Linux Kernel 2.4, an error message is displayed, specifying that the existing version is newer than the one you install.

Contact CA Support for a details regarding a hotfix for this issue.

## Issues in Interactive Mode Installation

During installation of CA Access Control for UNIX in interactive mode, the following was observed:

- You can select to specify the license agreement acceptance keyword, proceed, when you launch the install\_base script using the -command proceed option. If you select to do so, you are prompted to enter the keyword again during the installation.
- You can select to install the PUPM Agent on the endpoint without installing the Report Agent. If you select to do so and specify the Distribution Server communication settings to use SSL communication, the accommon.ini file Distribution\_Server token is incorrectly updated. For example:

```
Distribution_Server = none,ssl://192.168.1.1:7243
```

**Note:** For more information about the accommon.ini file, see the *Reference Guide*.

## CA Access Control Must Start After ENF on Linux

On Linux, if you load ENF (the Unicenter TNG or NSM kernel for version 3.x and earlier) after the CA Access Control kernel, you cannot unload the CA Access Control kernel.

Start CA Access Control after Unicenter TNG or Unicenter NSM.

## STOP is Not Activated when Native Stack Randomization is Enforced on Linux

The STOP feature on Red Hat Linux and SuSE Linux is not activated when Linux native stack randomization (ExecShield randomize) is enforced.

On Linux s390 RHEL 4, native stack randomization does not work and must be deactivated for STOP to be active. To deactivate native stack randomization, enter the following command:

```
echo 0 > /proc/sys/kernel/exec-shield-randomize
```



## Cannot Use UNIX selang Environment to Create User When passwd\_format=NT

If you set the seos.ini file token "passwd\_format" ([passwd] section) to "NT", you must use the "native" option (rather than "unix") when you create a user in selang. For example:

```
nu uSr_1026 native password(uSr_1026)
```

Alternatively, make sure that you work in the native environment (rather than the unix one), as follows:

```
env native  
chusr usr_1 password(my password)
```

## install\_base May Show Errors in a Solaris Zones Installation

If you install CA Access Control using *install\_base* in Solaris zones, errors that are caused by attempting to write to read-only files may appear.

Use Solaris native packaging to install CA Access Control on zones.

## Use of uninstall\_AC on Global Zone May Prevent Zone Users from Logging In

If you uninstall CA Access Control from the Solaris global zone using *uninstall\_AC* before you uninstall from all zones, users may not be able to log in to the zones.

Use Solaris native packaging to install and uninstall CA Access Control on zones.

## Early RPM Package Manager Versions Fail When Building Customized Package

RPM Package Manager versions earlier than rpm-4.2.2-0.8 will fail when building a customized package (customize\_eac\_rpm script).

**Note:** This is a known issue with the RPM Package Manager. For more information refer to the Red Hat Bugzilla website and look for bug 103867.

## Pre-r12.0 Versions Must Use a Maximum of 54 Characters for the Encryption Key

If your environment includes versions of CA Access Control earlier than r12.0, you must use a maximum of 54 characters for the encryption key.

## When PAM is Active segrace Is Not Called for FTP and SSH Grace Login

When PAM is activated, segrace is not called automatically for a grace login to FTP and SSH services.

## PAM Does Not Work on Linux s390x with Older `/lib64/libc.so.6` Library

PAM on Linux s390 and s390x does not work if the `/lib64/libc.so.6` library on the host is older than the version CA Access Control PAM library was compiled with.

The library version should be 2.3.2 or later.

## RPM Package Verification May Return Errors

When verifying RPM package installations you may receive some verification errors.

These errors do not indicate that there are issues with the functionality of the installed product and you can safely ignore them.

## CA Access Control Does Not Reset Passwords Once the Grace Period Expires

### **Valid on Solaris, HP-UX, and AIX**

If UNAB is installed on the CA Access Control endpoint, CA Access Control PAM does not invoke the 'sepass' utility to reset the account password when the user password grace period expires.

This problem affects login applications that use `loginflags(pamlogin)`, for example, SSH login, rlogin, FTP, and Telnet. SSH login will not be recognized as a login action by CA Access Control on Solaris, HP-UX and AIX. To work around this problem, use `loginflags(none)` for SSH login applications.

## Solaris Network Event Bypass Does Not Work for Some Processes

CA Access Control on Solaris does not bypass network events (bypass type PBN of SPECIALPGM records) for processes that start before CA Access Control starts.

## API Libraries for Linux Z-series Are 32-bit

The API libraries that CA Access Control supplies for Linux Z-series (s390x) are 32-bit.

CA Access Control does not supply 64-bit libraries for Linux Z-series (s390x).

## Client-Server Communication Mode Incompatibility

A client set up with `non_ssl` or `all_modes` cannot communicate with a server set up with `fips_only` communication mode.

## HP-UX requires an Updated Patch Level

On HP-UX, CA Access Control requires an updated patch level to install properly. We recommend the following OS patches:

- 11.23 on IA64—Patch PHSS\_37492 or OS QPK1123 Bundle that is dated September 2006 or later.
- 11.11 on PA-RISC—Patch PHSS\_35716 or OS QPK Bundle that is dated December 2006 or later.
- 11.23 on PA-RISC—OS QPK Bundle that is dated December 2006 or later.

## Use of `selang -d` on a Backed Up PMDB Can Lead to Issues

To back up a PMDB, including the advanced policy management server components (DMS and DH), use the `sepmdb -bd` backup option introduced in r12.0.

When backing up any PMDB, avoid using the following command, which can lead to various issues:

```
selang -d . -f file_name
```

You should use the following command instead:

```
selang -p pmd_name -f file_name
```

## Native Package Upgrade from r12.0 CR1 Does Not Work

You cannot use native packages to upgrade from r12.0 CR1 to r12.0 SP1 on Linux.

Use regular script installation to upgrade from r12.0 CR1. On Linux, you can also use the `--oldpackage` option when you upgrade using RPM packaging to work around this issue.

## Stat Interception Calls Not Supported on AIX Systems

File access check on a stat system call with the `STAT_intercept` token set to "1" is not supported on AIX systems.

## Cannot Stop CA Access Control on an HP-UX 11.11 Computer

If the system on an HP-UX 11.11 computer is busy, you may not be able to stop CA Access Control. To fix this problem, wait until the system is not busy, then stop CA Access Control.

# UNAB Considerations

This section describes items you should consider when using UNAB.

## HP-UX Feature Support Limitations

The following are known UNAB and CA Access Control limitations on HP-UX operating systems:

- HP-UX Trusted Computing Base (TBC) is not supported.
- seversion utility does not display SHA-1 signature.

**Note:** We recommend that you stop or restart the `pwgrd` daemon after modifying an Active Directory user account.

## UNAB Users Cannot Change Account Password According to Specified Password Policy

If UNAB users cannot change their account passwords, verify that the Domain Controller security policy you use does not prohibit users from changing their account passwords.

## UNAB for Linux390 Requires Java 1.5 and Above for Remote Management

To install UNAB on Linux390 and enable remote management of the endpoint, install Java 1.5 and above on the endpoint. Verify that the Java\_Lib\_Path token in accommon.ini specifies the full pathname to the installed version.

## sepass Integration with UNAB Endpoints

### Valid on Solaris

The sepass utility is integrated with UNAB on Solaris only. The integration lets users change their Active Directory passwords on Solaris endpoints on which both CA Access Control and UNAB are installed.

To integrate sepass with UNAB on Solaris:

- Verify that you set the "change\_pam" token value, in the seos.ini file, to **yes**. Configure this token to instruct sepass to change passwords using the PAM interface.
- Verify that you set the "auth\_login" token value, in the seos.ini file, to **pam**. Configure this token to instruct sepass to validate existing passwords using the PAM interface.

**Note:** For more information about seos.ini initialization file tokens, see the *Reference Guide*.

## Log In to UNAB with Active Directory Account

If you want to log in to UNAB with an Active Directory account that did not previously exist on the local host, follow these steps:

1. Register the UNAB host with Active Directory as follows:

```
uxconsole -register
```

2. Activate UNAB as follows:

```
uxconsole -activate
```

3. Create a UNAB login authorization (login policy) or local login policy (etc/passwd) to enable Active Directory users to log in.

## License Agreement Acceptance Keyword is Case Insensitive

When customizing the UNAB or CA Access Control installation packages, note that the license agreement acceptance keyword is case insensitive.

## Disable Local User Account After Migration

After fully migrating user accounts to Active Directory, you can disable the local UNIX account by adding an asterisk (\*) at the beginning of the account entry in the etc/passwd file.

## You Cannot Log In to CA Access Control for UNIX Using 'Administrator' Account When UNAB Is Installed

You cannot log in to a CA Access Control endpoint for UNIX with the 'Administrator' Active Directory user account if UNAB is installed on the endpoint. To work around this problem, you can create userPrincipalName for this account.

## UNAB Known Issues

This section describes known issues for UNAB.

### Active Directory User Cannot Change Password on Solaris

Due to Sun Solaris password limitations, users that are logging in to the UNIX host with Active Directory account, cannot change their account password using Solaris passwd tool. If the user must change the account password on the first login, the user must login from a system other than Solaris.

If UNAB is running on the UNIX host, use the following command to change the local account password:

```
passwd -r files username
```

If CA Access Control is running on the UNIX host, use the sepass utility to change the local account password.

### UNAB Not Supported on Linux IA64, Solaris x86 and x64

Currently, you cannot install UNAB on Linux IA64, Solaris x86 and x64 operating systems.

## UNAB Not Automatically Restarted After CA Access Control Is Installed on a UNAB Endpoint

UNAB is not automatically restarted after CA Access Control is installed on a UNAB host. To work around this issue, start up UNAB manually after you install CA Access Control.

**Note:** This issue does not occur if UNAB is installed on the same endpoint that CA Access Control is installed on.

## seaudit Reports "Deny" Events on UNAB Agent

seaudit reports "Deny" events on UNAB agent (uxauthd) if CA Access Control is installed on the endpoint. To work around this issue, add a SPECIALPGM rule for uxauthd\*.

For example:

```
auth FILE /opt/CA/AccessControlShared/accommon.ini uid(root) via(pgm(/opt/CA/uxauth/bin/uxauthd)) acc(ALL)
```

**Note:** Specify the valid path to the CA Access Control directory if you installed CA Access Control in a different location than the default.

You do not need to add the SPECIALPGM rule on systems that did not demonstrate this problem.

## UNAB Entries Contain Blank Fields in Event Viewer

UNAB events are displayed in the Windows Event Viewer with blank fields.

## User Prompted for New Password Twice and Received Incorrect Password Change Failure Message

### Valid on AIX

When you attempt to change your account password, the new password prompt appears twice and an "incorrect password change" message appears after you enter the new password. To fix this issue, do the following:

1. Open the `etc/pam.conf` file for editing.
2. Remove the following entry:  
`passwd password optional /usr/lib/security/pam_aix`
3. Locate the following entry:  
`password password required /usr/lib/security/pam_aix try_first_pass`
4. Remove the `try_first_pass` parameter from the end of the line.
5. Save and close the file.

## UNAB is not FIPS140-2 and IPV6 Compliant

Currently, UNAB is not FIPS140-2 and IPV6 compliant.

## Successful Login to Host Generates an Error Message

A limitation in the UNIX PAM flow results in logging a successful login to a UNAB host as an error message, indicating that account authentication failed in the `/var/log/message`.

## uxconsole -manage -edit Option is Not Supported

Currently the UNAB `uxconsole -manage -edit` option is not supported. You cannot use the `uxconsole` to edit users and groups parameters before migrating them to Active Directory.

## UNAB Not Started by CA Access Control Watchdog on Linux x64

When running UNAB and CA Access Control 64-bit version on Linux x64, UNAB is not registered as a daemon and as a result, the CA Access Control watchdog daemon (`seoswd`) cannot start the UNAB daemon if it was not shut down in an orderly fashion.



## UNAB Does Not Support CA Access Control r8.0 SP1 and r12.0 SP1

Currently, you cannot install UNAB on CA Access Control r8.0 SP1 and r12.0 SP1 endpoints.

## Ten-Second Interval between `uxconsole -activate` and `-deactivate` Commands

There is a ten-second refresh period when activating and then deactivating UNAB.

## Server Components Considerations

This section describes items you should consider when using CA Access Control server components (CA Access Control Endpoint Management, CA Access Control Enterprise Management, and Enterprise Reporting).

### Disable Tunneled Clear Text Passwords on SSH Endpoints

#### **Valid on Linux**

When you configure a PUPM SSH endpoint, disable tunneled clear text passwords on the endpoint before you configure the endpoint settings.

#### **To disable tunneled clear text password on SSH endpoint**

1. Open the `sshd_config` file for editing. This file is located in the following directory:

`etc/ssh`

2. Locate the `PasswordAuthentication` tag and set the value to **yes**.

**Example:** `PasswordAuthentication yes`

### Default JBoss Port

The default JBoss port has changed in r12.5. It is now 18080.

## The r12.5 SP1 CA Access Control Enterprise Management Server Does Not Support CA Identity Manager r12.5 and r12.5 SP1

Currently, the CA Access Control Enterprise Management Server r12.5 SP1 does not support CA Identity Manager r12.5 and CA Identity Manager r12.5 SP1. Further, PUPM cannot connect or manage CA Identity Manager r12.5 and r12.5 SP1 connectors (Active Directory, CA Access Control, CA-ACF2, CA-Top Secret, Windows NT, IBM RACF, NDS Servers).

## Windows Agentless Endpoint Management from CA Access Control Enterprise Management for UNIX Requires a Windows Distribution Server

To manage a PUPM Windows agentless endpoint using CA Access Control Enterprise Management for UNIX, install the Distribution Server on that or any other Windows endpoint. Once you install the Distribution Server, configure CA Access Control Enterprise Management to use the Java Connector Server (JCS) on the Distribution Server you installed.

**Note:** For more information about using and configuring the Distribution Server, see the *Implementation Guide*.

## The PUPM Endpoints and Accounts Feeder CSV File Fields are Case Sensitive

The PUPM feeder CSV file fields are case sensitive. Verify that you enter the parameters, for example computer name, exactly as they are configured.

## Maximum Recommended Records in the PUPM Feeder CSV is 500 Endpoints or Accounts

We recommend that you limit the number of endpoints or accounts in a single PUPM feeder CSV file to 500.

## Search Root Parameters Are Case Sensitive

### **Valid on Active Directory**

#### **Symptom:**

When I run the capture snapshot task, the reports are missing both the approver and requester data.

#### **Solution:**

The problem occurs due to the Active Directory search root string parameters. If the search root strings are not defined as the distinguished name of the search root on Active Directory, the reports do not display the approver and requester fields.

You can modify the Active Directory search root settings after installing CA Access Control Enterprise Management.

**To modify the Active Directory search root parameters**

1. Enable the CA Identity Manager Management Console.
2. Open the CA Identity Manager Management Console.
3. Select Directories.

The Directories page appears.

4. Select ac-dir.

The Directory Properties page appears.

5. Select Export.

The ac-dir.xml file is exported.

6. Locate the following tag:

```
<LDAP searchroot="dc=domain_name,dc=corp" secure="false"/>
```

7. Enter the search root string parameters as defined in the distinguished name of the search root on Active Directory. For example:

```
<LDAP searchroot="DC=domain_name,DC=corp" secure="false"/>
```

8. Locate the following tag:

```
<Container objectclass="top,organizationalUnit" attribute="ou"/>
```

9. Add the string **value=""** at the end of the tag as in the following example:

```
<Container objectclass="top,organizationalUnit" attribute="ou" value=""/>
```

**Note:** The tag appears in two locations in the file. Verify that you apply the change to both locations.

10. Save and close the file.

11. In CA Identity Manager Management Console, from the directory properties page, click Update.

The Update Directory window appears.

12. Type the path and file name of the XML file for updating the directory, or browse for the file, then click Finish.

Status information is displayed in the Directory Configuration Output field.

13. Click Continue and restart the environment.

You can now run the capture snapshot task to capture reporting data.

**Important!** The modified settings do not apply to existing transactions. Reports with new transactions will display the requester and approver fields.

## Do Not Configure More Than a Single Oracle Schema with Reporting Tables

Verify that you do not configure more than a single Oracle schema with reporting tables. Having more than a single Oracle schema with reporting tables can lead to failures when executing the capture snapshot task.

## CA Identity Manager Provisioning Connector Server Successfully Created in PUPM but Not Validated

The provisioning connector server is successfully created, however you cannot acquire provisioning accounts. The problem occurs because the CA Identity Manager provisioning connector server parameters are not validated correctly.

**Note:** The provisioning domain name is case sensitive.

## Log In to the Windows Endpoint Before You Configure the Endpoint in CA Access Control Enterprise Management

Before you configure a Windows agentless endpoint in CA Access Control Enterprise Management, we recommend that you log in to the endpoint. For example, use the run command line utility to connect and verify that you can log in to the endpoint.

## You Cannot Configure More Than a Single CA Identity Manager Provisioning Connector Server

Do not configure more than a single CA Identity Manager provisioning connector server in CA Access Control Enterprise Management.

## CA Access Control Host Name Limitation

The host name of the CA Access Control endpoint must be 15 characters or less. If the host name of the CA Access Control computer exceeds 15 characters, you cannot use CA Access Control Endpoint Management to log into the endpoint.

## Cannot Configure CA Identity Manager Provisioning Connector Server Using SSL Port

When you configure an CA Identity Manager provisioning connector server, do not specify the CA Identity Manager provisioning server SSL port (20390). If you specify the connector server SSL port, the connection to the connector server fails.

## Separate List of Identifier Users with a Comma

When you configure a new application and specify more than a single user in the Identifier Users field, separate between the users using a comma.

For example: user1, user2, user3

## Specify the Etaadmin Full Distinguished Name

When you configure an CA Identity Manager provisioning connector server, specify the full distinguished name of the etaadmin.

For example:

```
eTGlobalUserName=etaadmin,eTGlobalUserContainerName=Global  
Users,eTNamespaceName=CommonObjects,dc=ProvisioningDomainName,dc=eta
```

## Supported JDK and JBoss Versions

You can find supported JDK and JBoss versions on the CA Access Control Premium Edition Third Party Components DVDs.

## CA Access Control Database Size Limitation

The CA Access Control database is limited to one million (1,000,000) objects. This size limitation is only likely to affect your deployment if you use advanced policy management in a large environment.

If the CA Access Control database in your enterprise is expected to hold 1,000,000 objects, you need to remove old DEPLOYMENT objects that are no longer in use.

### **Example: Calculating the Number of Objects in the CA Access Control Database**

The following example shows you how to calculate the number of objects that you can expect to have in the DMS-the central CA Access Control management database.

In this example, we have an enterprise deployment of CA Access Control on 5000 endpoints, each holding 50 assigned policies. As a result, the DMS contains at least 250,000 objects, as follows:

$5,000 \text{ endpoints} \times 50 \text{ policies} = 250,000 \text{ DEPLOYMENT objects}$

If over time you create four versions of each policy, and assign these policies to each of your 5000 endpoints, the number of objects in the DMS will reach the 1,000,000 objects limit, as follows:

$5,000 \text{ endpoints} \times 50 \text{ policies} \times 4 \text{ version} = 1,000,000 \text{ DEPLOYMENT objects}$

## RDBMS Connection Fails During Installation if Java Cannot Be Found

During CA Access Control Enterprise Management installation, when it tries to connect to the RDBMS, a connection failure may suggest that java.exe cannot be located.

Make sure that the full pathname to java.exe is in the system's PATH environment variable.

## CA Access Control Endpoint Management Shortcut Points to Port Number 8080

By default, the CA Access Control Endpoint Management installer sets the shortcut to port number 8080. To change the default settings, you must run the CA Access Control Endpoint Management installer directly from the CA Access Control Premium Edition DVD and not from the ProductExplorer.

Use the following command line to define the port to use when installing CA Access Control Endpoint Management:

```
install_EM_r125.exe -DJBOSSE_PORT=<18080>
```

Alternatively, you can edit the CA Access Control Endpoint Management shortcut to point to a different port after the installation.

## CA Access Control Endpoint Management Installation Instructions Refer to Both Editions of CA Access Control

The CA Access Control Endpoint Management installation instructions that are documented in the Installing CA Access Control Endpoint Management chapter of the Implementation Guide apply to both CA Access Control Premium Edition and CA Access Control. Non-CA Access Control Premium Edition users that want to install CA Access Control Endpoint Management should follow these instructions and use the non-Premium Server DVD.

## Do Not Execute the PUPM Privileged Accounts Discovery Wizard on More Than One Endpoint Type Concurrently

PUPM does not support running the Privileged Accounts Discovery Wizard on more than one endpoint type concurrently. Running the wizard on more than one endpoint type concurrently results in failure to create privileged accounts in the PUPM database or, failure to reset the account passwords on discovery.

Always run the discovery wizard on one endpoint type at a time, verify that the wizard successfully completed the tasks and then run the wizard on another endpoint type.

## CA Enterprise Log Manager Does Not Include PUPM, UNAB Reports

In this version, CA Enterprise Log Manager does not include PUPM nor UNAB reports.



## CA Enterprise Log Manager Supports Only Trusted SSL Connection

When defining the connection settings of the CA Enterprise Log Manager server, define the SSL connection settings. CA Enterprise Log Manager does not support non-SSL connection.

**Note:** For more information about integrating with CA Enterprise Log Manager, see the *Implementation Guide*.

## Special Subscription Needed to View CA Enterprise Log Manager Reports from CA Access Control Enterprise Management

To use view CA Enterprise Log Manager reports from the CA Access Control Enterprise Management interface, apply a special subscription update to your CA Enterprise Log Manager server.

### To apply the subscription update

1. In CA Enterprise Log Manager, click the Administration tab, the Services subtab, and select the Subscription Module.
2. Provide the following RSS feed URL:  
`http://securityupdates.ca.com/CA-ELM/r12/OpenAPI/RSSFeed.xml`
3. Download and apply all of the modules to CA Enterprise Log Manager.  
You can now view CA Enterprise Log Manager reports from CA Access Control Enterprise Management.

## Set Up CA Access Control Enterprise Management to Work with Active Directory on Another Domain

If you want to work with an Active Directory that is located outside of the domain that you installed CA Access Control Enterprise Management on, you must change the host TCP/IP settings.

### To set up CA Access Control Enterprise Management to work with Active Directory on another domain

#### On Windows

1. Click Start, Control Panel, Network Connections.  
The Network Connections window appears.
2. Right-click the active network connection and click Properties.  
The Connection Properties dialog appears with the General tab open.

3. Select Internet Protocol (TCP/IP) and click Properties  
The Internet Protocol (TCP/IP) Properties General tab appears.
4. Click Advanced and click the DNS tab in the open dialog.  
The Advanced TCP/IP Settings DNS tab appears.
5. Click Add and enter the IP address of the DNS server of the domain that Active Directory is located on.
6. Select Append these DNS suffices (in order) and click Add to add a suffix.  
The TCP/IP Domain Suffix dialog appears.
7. Enter the domain suffix.  
**Example:** *company.com*
8. Click OK on all open dialogs to confirm your changes and exit.

### On UNIX

Verify that the DNS server name of the domain that Active Directory is located on is set to the correct value.

To verify that the DNS domain name, open the file `/etc/resolv.conf` and verify that the domain is set to the correct value.

## Automatic Generation of Policy Undeploy Script

When you undeploy a policy that does not have an associated undeploy script, CA Access Control automatically generates the required script to remove the policy. This script is based on the deployment script.

If you want to remove the policy but *keep* the policy rules (from the deployment script), provide an undeployment script with a rule that does not modify anything (for example, `er GPOLICY policyName`).

## Communication Issues between CA Access Control Components and CA Access Control Message Queue

The following CA Access Control components rely on communications with the CA Access Control Message Queue for some functionality:

- Report Agent
- DMS
- UNAB
- PUPM Application to Application

These components may not be able to communicate with the Message Queue if it is not running, the configuration options are not set correctly for the Message Queue host or queue, or a generic network error is present.

If communication between any of these components and the Message Queue cannot be established or breaks down, the communication does not resume automatically when the problem is fixed. To work around this issue you must fix the communication issue and then restart the CA Access Control component.

## CA Access Control Enterprise Management Default Encryption Method Set to 256AES

The CA Access Control Enterprise Management default encryption method is set to 256AES and not scramble.

## Oracle Database XE Does Not Resolve the database SID as Required

Oracle Database XE does not resolve the Oracle database SID to service name in JDBC database URLs as required by CA Access Control Enterprise Management. This means that you may need to ensure that the Oracle database SID matches the Oracle database service name (SID=SERVICE\_NAME) to work around this issue.

To set this, you need to modify the Oracle listener configuration file (listener.ora).

## Required Upgrade Sequence

When you upgrade CA Access Control in an enterprise implementation, you should always upgrade the server components before you upgrade endpoints.

## **Superuser Account Required for Server Components Installations**

To install any of the CA Access Control server components (such as Endpoint Management and Enterprise Management), you must log in as the superuser (root on UNIX or Administrator on Windows).

## **Synchronize the System Time of the CA Access Control Enterprise Management and Report Portal Computers**

If you install the Report Portal on a separate computer to CA Access Control Enterprise Management, you must synchronize the system time of the computers. If you do not synchronize the system times, reports that CA Access Control Enterprise Management generates will remain in a pending or recurring status.

## **Prerequisite Kit Installer Considerations**

When using the Prerequisite Kit installer utility to install CA Access Control Enterprise Management from the media, after you are prompted to insert the CA Access Control Enterprise Management DVD, you must select Done to continue. You may also need to close the ProductExplorer window that appears when you insert the DVD.

## **PUPM Windows Agentless Connector for Active Directory Search Limitations**

When using the PUPM Windows Agentless connector to connect to Active Directory the wild card (\*) and retrieve all search options do not work. To search for users you must supply the specific account details.

## **Do Not Use Administration API Functions Inside a seosd Exit**

To avoid deadlocks, do not use any Administration API functions inside a seosd exit.

## **Uninstall Fails if You Are Not the Superuser**

To uninstall any of the CA Access Control server components (such as Endpoint Management and Enterprise Management), you must log in as the superuser (root on UNIX or Administrator on Windows). If you are not logged in as the superuser, the uninstall fails.

## Server Components Known Issues

This section describes known issues for CA Access Control server components (CA Access Control Endpoint Management, CA Access Control Enterprise Management, and Enterprise Reporting).

### Cannot View or Schedule PUPM Reports Due to a "Page Encapsulation Failed" Error Message on Oracle

**Symptom:**

When you attempt to view or schedule PUPM reports using Oracle Database, you may receive a "Page Encapsulation Failed" error message. You are able to view and schedule all other reports.

**Solution:**

To work around this problem, execute the following SQL statement using SQLPlus or the Oracle WebUI while logged in as the reporting database user:

```
CREATE OR REPLACE VIEW "PPMACCOUNTUSERACCESS_VIEW"  
("IMR_REPORTID","PPM_ACCOUNTID","IMR_USERDN","PPM_ISEXCEPTION") AS  
SELECT imr_reportid, ppm_accountid, imr_userdn, 'false' AS ppm_isexception  
FROM PPMACCOUNTUSERACCESS  
UNION  
SELECT imr_reportid, ppm_accountid, imr_requestor_userdn AS imr_userdn, 'true' AS ppm_isexception  
FROM PPMPRIVILEGEDACCOUNTEXCEPTION;
```

**Note:** Verify that you run this query as a user with DBOwner privileges on the CA Access Control Enterprise Management database.

## **Roles Not Resolved When a Member of a Group with More Than 1000 Members Logs In To the CA Access Control Enterprise Management Server**

Members of an Active Directory users group that contains more than 1000 users that attempt to log into the CA Access Control Enterprise Management Server may experience incorrect admin and privileged roles resolution. This behaviour may result users not logging in with their assigned roles.

For example, an Active Directory user that is assigned the System Manager admin role, logs into the CA Access Control Enterprise Management Server and is assigned the User admin role.

To workaround this problem, configure the admin role members using the MemberOf filter option and specify the full distinguished name of the Active Directory group.

For example:

CN=GroupName,OU=OrganizationalUnit,DC=DomainName,DC=corp

## **Capture Snapshot Fails When Executed By a Member of an Active Directory Group With More Than 1000 Members**

The Capture Snapshot task fails when executed by a user that is a member of an Active Directory group with more than 1000 users.

## **A CA Access Control User Not Defined a Password Cannot Log Into the CA Access Control Enterprise Management Server**

An CA Access Control user account without a password cannot log into the CA Access Control Enterprise Management Server.

## PUPM SSH Device Cannot Set Password if UNAB is Installed on the Endpoint

If UNAB is installed on a CA Access Control for UNIX endpoint that is configured as PUPM SSH device, PUPM cannot set privileged accounts passwords on that endpoint, because PUPM runs the `passwd` command without specifying an argument.

### To work around this issue

1. Create an `ssh.xml` file using the `ssh_connector_conf.xml` file. By default, this file is located in the following directory:

```
\AccessControlServerDir\Connector Server\conf\override\sshdyn\
```

2. Locate the `<param name="sCommand" value="passwd [%%user%%]" />` tag.

3. Add the value **"-r files"** to the "sCommand" parameter. For example:

```
<param name="sCommand" value="passwd -r files [%%user%%]" />
```

4. Save and close the file.

**Important!** Verify that you create an SSH device endpoint in the CA Access Control Enterprise Management Server and specify the file you created in the Configuration File field.

## Report Agent and DMS Fail to Communicate with Message Queue Server on CA Access Control Enterprise Management for Solaris

On CA Access Control Enterprise Management for Solaris, the report agent and DMS fail to communicate with the local Message Queue Server. To work around this problem, execute the following on the CA Access Control Enterprise Management Server:

```
/opt/CA/AccessControlServer/APMS/AccessControl/bin/sechkey -t -pwd <reportserver password> -server  
/opt/CA/AccessControlServer/APMS/AccessControl/bin/sechkey -t -pwd <+reportagent password>
```

Enter the communication password you defined when you installed the CA Access Control Enterprise Management Server, or any other password that you defined for the reportserver and +reportagent accounts.

## Japanese and Korean Reports Viewable in InfoView Only

You can view the following CA Access Control Japanese and Korean reports only from InfoView and not from CA Access Control Enterprise Management:

- Baseline Resource Compliance
- Group Privileges

## PUPM Is Not FIPS140-2 and IPV6 Compliant

Currently, PUPM is not FIPS140-2 and IPV6 compliant.

## Control Characters May Cause an Application Exception

Control characters in the CA Access Control database may cause an application exception or render incorrectly in CA Access Control Endpoint Management and CA Access Control Enterprise Management.

## Incomprehensible Characters In the User Interface

### **Symptom:**

When I log into the CA Access Control Enterprise Management user interface, I see incomprehensible characters.

### **Solution:**

The problem is that the database instance you are using does not fully support UTF8 international characters set. To correct this problem, you must reinstall CA Access Control Enterprise Management on a fully internationalized database instance.

## Cannot View Audit Records for Terminals with Names Longer than 30 Characters

You cannot view audit records if the terminal name has more than 30 characters. This happens when CA Access Control Endpoint Management running on a Windows computer manages a UNIX endpoint.

## Report Portal Installation Fails If C:\temp Does Not Exist

By default, the Report Portal installation creates a log file on C:\temp. If this directory does not exist, the installation will fail without any feedback. Make sure this directory exists or customize the location of the log file.



## Reset Host Does Not Work If GHNODE Name Contains a Space

In CA Access Control Enterprise Management, if a host group (GHNODE) contains a space character in its name and you try to reset a host (HNODE) that is a member of that host group, the reset operation fails. CA Access Control returns the following message:

```
ERROR: Executing command: 'cr GHNODE GHNODE Name mem-("HNODE_Name") noexit' failed with error  
code: 10057.  
ERROR: Syntax error  
ERROR: Invalid token Name
```

To work around this issue, do not include a space character in host group names.

## List of Values Does Not Refresh Automatically When Data Sources Change

On the Report Portal, the List of Values (LOV) in the standard reports CA Access Control provides out-of-the-box does not refresh automatically when data source environments change. This is a known issue with BusinessObjects. You must manually refresh LOVs when you schedule reports.

### To refresh these values manually

1. Click Start, Programs, BusinessObjects XI Release 2, BusinessObjects Enterprise, BusinessObjects Enterprise Java Administration Launchpad.

The Business Objects Business Intelligence platform Administration Launchpad opens in a web-browser.

2. Click Central Management Console.

The Central Management Console Home page appears.

3. Click Folders in the Organize pane on the left.

The Top Level Folders page appears.

4. Click the CA Reports folder.

The CA Reports page appears, displaying the list of folders in CA Reports.

5. Click CA Access Control.

A page displaying all of the reports available in this folder appears.

6. For each of the CA Access Control Crystal Reports displayed in the list, do the following:

- a. Click the report.

A page displaying the properties of the report appears.

- b. Click Refresh Options in the Properties tab of the page.

A list of properties you can refresh appears.

- c. Click Select All, click Refresh Report, then click Update.

The selected Crystal Report refreshes.

## Refresh Mechanism in On-Demand Reports Stops Working After a Manual Refresh

On the Report Portal, if you follow the procedure for [manually refreshing reports](#) (see page 106) the refresh mechanism in On-Demand reports stops working. To correct this, change the global refresh setting as follows.

### To change the global refresh setting on Windows

1. Open the Windows Registry Editor.
2. Navigate to the following registry key:  
`HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.0\Crystal Reports\`
3. Click Edit, New, Key.  
A new registry key appears.
4. Rename the key to *Database*.
5. In the new key, click Edit, New, String Value.  
A new registry entry of type REG\_SZ appears.
6. Rename the entry to *AlwaysRefreshUniverseLOV*.
7. Double-click the entry and edit its Value data to 1.  
The new registry entry is set.

### To change the global refresh setting on Solaris

1. Open a terminal window.
2. Source the env.sh file in the setup directory of the BusinessObjects installation path as follows:  
`../boobje/setup/env.sh`
3. Enter **regedit** on the command line.  
The Mainwin registry appears.
4. Navigate to the following entry:  
`HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.0\Crystal Reports\`
5. Create a new key called Database.
6. In the Database key, create a new string value *AlwaysRefreshUniverseLOV* with the value 1.

**Note:** This is a global setting and has a performance impact on all BusinessObjects reports on this server. Values in input parameter lists are not cached in this configuration.

## **Login to CA Access Control Enterprise Management Using Active Directory Administrator Account**

When Active Directory is the user store for CA Access Control Enterprise Management, you must log in to CA Access Control Enterprise Management with the Active Directory account that you provided during the installation and not with the built-in superadmin account. When using Active Directory for the user store, the superadmin account is not assigned the admin role of SystemManager and you should not use it to administer CA Access Control Enterprise Management.

## **Cannot Display r5.3 Audit Records**

CA Access Control Endpoint Management cannot display audit records for eTrust Access Control r5.3. Use seaudit to display audit records from endpoints using this version of the product.

## **Cannot Change Active Directory Account Password using CA Access Control Enterprise Management Windows Connector**

The CA Access Control Enterprise Management Windows connector does not support changing Active Directory account password. You can use the CA Access Control Enterprise Management Windows connector to change the passwords of local Windows accounts.

## **PMDB Audit Records Are Not Visible When Managing the PMDB**

When you manage a PMDB using CA Access Control Endpoint Management, you cannot see the PMDB's audit records.

To work around this issue and view the audit records for the PMDB, connect to host where the PMDB resides.

## **Cannot Change the Trust Property of a Monitored File**

In CA Access Control Endpoint Management, clearing the Trust check box on the Audit tab of a monitored file (SECFILE) resource fails when you try to save the changes.

To work around this issue and change this resource attribute, use selang.

## Do Not Use '\$' Character for CA Access Control Enterprise Management Database Password

### Symptom:

When I install CA Access Control Enterprise Management, I enter the database password and receive the following error message: "Database version could not be detected".

### Solution:

CA Access Control Enterprise Management installation displays this error message if you enter a '\$' character at the end of the password. If you must place a '\$' character at the end of the password, you must change the database password after the installation.

**Note:** For more information about password management, see the *Reference Guide*.

## "No Operation Required" Message When Modifying UNAB Host or Host Group

When modifying UNAB host or host group settings and submitting the changes, CA Access Control Enterprise Management displays the following message: "No operation required". Although this message indicates that no action was taken, the modifications you made to the UNAB host or host group were applied.

## CA Access Control Enterprise Management Time-Out When Creating Large Policies

The CA Access Control Enterprise Management user interface times out when you create a policy that contains more than 6000 commands. You cannot continue working in the user interface until CA Access Control Enterprise Management creates the policy. To work around this problem, open a new session by logging in to CA Access Control Enterprise Management from a new browser.

## Non-English Installation Displays Some English Text

CA Access Control Enterprise Management installation in non-English mode displays some English text.

## Cannot Deploy Policies That Contain a Trailing Backslash

Conventions for `selang` let you use a backslash character (`\`) as the last character of a line to indicate that the command continues on the following line. This is not supported by advanced policy management. Make sure that policy commands do not span multiple lines.

**Note:** The following sample policies CA Access Control provides contain a trailing backslash: `_AC_WEBSERVICE`, `_APACHE`, `_JBOSS`, `_MS_SQL_SERVER`, and `_ORACLE`.

## Access Roles Are Not Supported in CA Access Control Enterprise Management

When you define admin role rules, select users that are members of admin roles. CA Access Control Enterprise Management does not support access roles. The access roles option should not appear in the interface.

## Report Portal Fails to Load a Service

### Valid on Windows

After you restart a Windows Report Portal, the following message appears:

At least one service or driver failed during system startup.  
Use Event Viewer to examine the event log for details

This message appears because the BusinessObjects Desktop Intelligence service does not load automatically. This does not affect the CA Access Control reporting service as it does not use this service.

To work around this issue, change the startup type of the service to *Manual*.

## Policy Script Validation Error Messages Are in a Different Language

### Valid in CA Access Control Enterprise Management

If a policy deploys with errors, the `selang` result messages you see in CA Access Control Enterprise Management are in the installation language of the CA Access Control endpoint on the Enterprise Management server and not that of the CA Access Control Enterprise Management installation.

To see these messages in a localized language, you must install the CA Access Control endpoint on the Enterprise Management computer in the desired localized language before you install CA Access Control Enterprise Management.

## PUPM Windows Agentless Connector for Active Directory Search Limitations

When using the PUPM Windows Agentless connector to connect to Active Directory with more than 2000 users, the wild card (\*) and retrieve all search options do not work. To search for users you must supply the specific account details.

## PUPM Windows Agentless Connector Does Not Support Windows 2000

The PUPM Windows Agentless connector does not support Windows 2000 Server.

## Define a Comma Separated List of Users When Creating a PUPM Application

When defining a PUPM application in CA Access Control Enterprise Management, use a comma (,) to separate the users in the Identifier Users list. Use the following format when adding users:

user1, user2, [..]

**Note:** On Windows, you must provide the fully qualified user name.

## Documentation Known Issues

This section describes known issues for the CA Access Control documentation set.

## No Alternate Text for Graphics In the SDK Guide

There is no alternate text for graphics in the SDK Guide. The SDK Guide was first published with a previous release of CA Access Control and is provided as a courtesy with the CA Access Control r12.5 documentation.





# Appendix A: Third-Party License Agreements

---

This section contains the following topics:

[Software Under the Apache License](#) (see page 114)  
[Software Under the Daniel Veillard License](#) (see page 121)  
[Software Under the OpenLDAP License](#) (see page 123)  
[Software Under the OpenSSL License](#) (see page 126)  
[AES 2.4](#) (see page 132)  
[AIX JRE 1.4.2](#) (see page 133)  
[AIX JRE 1.5.0](#) (see page 133)  
[ANTLR 2.7.5H3](#) (see page 134)  
[CPAN Perl 5.8.8](#) (see page 135)  
[CRC32](#) (see page 136)  
[Cyrus SASL 2.1.22](#) (see page 138)  
[dom4j 1.5](#) (see page 141)  
[Hibernate 3.2](#) (see page 142)  
[ICU4C 3.4](#) (see page 143)  
[JBoss 4.0.1 SP1](#) (see page 144)  
[JBoss Application Server v.4.2.3](#) (see page 145)  
[JBoss Native v.2.0.6](#) (see page 146)  
[JDOM 1.0](#) (see page 147)  
[MD5 Message Digest Algorithm](#) (see page 150)  
[MIT Kerberos v5 r1.5](#) (see page 152)  
[nss ldap 2.62](#) (see page 175)  
[Oracle JDBC Driver 10g Release 2 \(10.2.0.1.0\)](#) (see page 182)  
[PCRE 6.3](#) (see page 187)  
[Rhino 1.6r4](#) (see page 189)  
[SAXPath 1](#) (see page 190)  
[SHA-1](#) (see page 193)  
[Sun JDK 1.4.2\\_13](#) (see page 194)  
[Sun JDK 1.6.0](#) (see page 205)  
[Sun JRE 1.5.0\\_18](#) (see page 220)  
[XNTP v.3-5.93](#) (see page 234)  
[XScreenSaver](#) (see page 235)  
[Zlib 1.2.3](#) (see page 235)  
[ZThread 2.3.2](#) (see page 236)

## Software Under the Apache License

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

- Ant 1.6.5
- Axis 1.2.1
- Axis 1.4
- Axis2 1.1.1
- Commons BeanUtils 1.6.1
- Commons BeanUtils 1.7
- Commons Codec 1.3
- Commons Collection 3.1
- commons dbcp 1.2.1
- Commons Digester 1.7
- commons discovery 0.2
- commons el 1.0
- Commons FileUpload 1.2
- Commons httpclient 2.0.2

This product includes Jakarta Commons HttpClient 2.0.2 which is distributed in accordance with the following license agreement.

- Commons httpclient 3.0.1
- Commons Lang 2.1
- Commons Logging 1.0.4
- Commons Logging 1.04
- Commons Pool 1.3
- Commons Validator 1.2
- HTTP Web Server 2.0.54
- HTTP Web Server 2.2.3
- JSTL 1.0.6
- Log4j 1.2.8
- myfaces 1.1.4
- ORO 2.0.8
- Slide 2.1
- Struts 1.2.9

- Tofigurator v.1.0

This product includes Tofigurator v.1.0, which is distributed in accordance with the following license agreement.

- tomahawk 1.1.5
- Tomcat 5.0.28
- Tomcat 5.5.12
- Tomcat 5.5.20

This product includes Apache Tomcat 5.5.20 which is distributed in accordance with the following license agreement.

- Velocity 1.4
- Xalan-C 1.10.0
- Xalan-C 1.9.0
- Xalan-J 2.6.0
- Xalan-J 2.7.0

This product includes Apache Xalan-J v.2.7.0, which is distributed in accordance with the following license agreement(s):

- Xerces-C++ 2.6.0
- Xerces-C++ 2.7.0
- Xerces-C++ 2.8.0

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



## Software Under the Daniel Veillard License

Portions of this product include software developed by the Daniel Veillard.

- Libxml2 2.6.27
- Libxml2 2.6.7

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, FIT-

NESS 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 CON-

NECTION 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 deal-  
ings in this Software without prior written authorization from him.

## Software Under the OpenLDAP License

This product includes software developed by The OpenLDAP Foundation:

- OpenLDAP 2.1
- OpenLDAP 2.3.39 (20071118)

This product includes software distributed in accordance with the following license agreement:

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.

## Software Under the OpenSSL License

This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>):

- OpenSSL 0.9.8.d

This product also includes libraries from an SSL implementation written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)). This product includes software written by Tim Hudson ([tjh@cryptsoft.com](mailto:tjh@cryptsoft.com)).

- OpenSSL 0.9.8h

This product also includes libraries from an SSL implementation written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)). This product includes OpenSSL Toolkit v0.9.8h, which is distributed in accordance with the following terms:

### 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](mailto:openssl-core@openssl.org).

### 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](mailto: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](mailto:eay@cryptsoft.com)). This product includes software written by Tim



\* Hudson (tjh@cryptsoft.com).

\*

\*/

Original SSLeay License

-----

/\* Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

\* All rights reserved.

\*

\* This package is an SSL implementation written

\* by Eric Young (eay@cryptsoft.com).

\* The implementation was written so as to conform with Netscapes SSL.

\*

\* This library is free for commercial and non-commercial use as long as

\* the following conditions are aheared to. The following conditions

\* apply to all code found in this distribution, be it the RC4, RSA,

\* lhash, DES, etc., code; not just the SSL code. The SSL documentation

\* included with this distribution is covered by the same copyright terms

\* except that the holder is Tim Hudson (tjh@cryptsoft.com).

\*

\* Copyright remains Eric Young's, and as such any Copyright notices in

\* the code are not to be removed.

\* If this package is used in a product, Eric Young should be given attribution

\* as the author of the parts of the library used.

- \* This can be in the form of a textual message at program startup or
- \* in documentation (online or textual) provided with the package.
- \*
- \* Redistribution and use in source and binary forms, with or without
- \* modification, are permitted provided that the following conditions
- \* are met:
- \* 1. Redistributions of source code must retain the copyright
- \* notice, this list of conditions and the following disclaimer.
- \* 2. Redistributions in binary form must reproduce the above copyright
- \* notice, this list of conditions and the following disclaimer in the
- \* documentation and/or other materials provided with the distribution.
- \* 3. All advertising materials mentioning features or use of this software
- \* must display the following acknowledgement:
- \* "This product includes cryptographic software written by
- \* Eric Young (eay@cryptsoft.com)"
- \* The word 'cryptographic' can be left out if the 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 publically available version or

\* derivative of this code cannot be changed. i.e. this code cannot simply be

\* copied and put under another distribution licence

\* [including the GNU Public Licence.]

\*/

## AES 2.4

Portions of this product include software developed by Enhanced Software Technologies. The Enhanced Software software is distributed in accordance with the following license agreement.

This software is Copyright 1999,2000 Enhanced Software Technologies Inc.

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

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

This product includes software developed by Enhanced Software Technologies Inc. and its contributors.

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

THIS SOFTWARE IS PROVIDED BY THE COMPANY 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 COMPANY 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.

## AIX JRE 1.4.2

CONTAINS IBM(R) 32-bit Runtime Environment for AIX(TM), Java(TM) 2  
Technology Edition, Version 1.4 Modules

(c) Copyright IBM Corporation 1999, 2002

All Rights Reserved

## AIX JRE 1.5.0

CONTAINS IBM(R) 32-bit Runtime Environment for AIX(TM), Java(TM) 2  
Technology Edition, Version 1.5 Modules

(c) Copyright IBM Corporation 1999, 2002

All Rights Reserved

## ANTLR 2.7.5H3

Portions of this product include software developed by the ANTLR.org. The ANTLR software is distributed in accordance with the following license agreement.

ANTLR 3 License

[The BSD License]

Copyright (c) 2005, Terence Parr

All rights reserved.

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

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 author nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

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

## CPAN Perl 5.8.8

Portions of this product include software copyrighted by Larry Wall. The Standard Version of Perl 5.8.3 can be downloaded from <http://www.perl.org/>.

## CRC32

Portions of this product include software developed by Markus Friedl and are distributed in accordance with the following copyright and permission notices.

```
/*      $OpenBSD: crc32.c,v 1.9 2003/02/12 21:39:50 markus Exp $ */
```

```
/*
```

```
 * Copyright (c) 2003 Markus Friedl. All rights reserved.
```

```
 *
```

```
 * Redistribution and use in source and binary forms, with or without
```

```
 * modification, are permitted provided that the following conditions
```

```
 * are met:
```

```
 * 1. Redistributions of source code must retain the above copyright
```

```
 * notice, this list of conditions and the following disclaimer.
```

```
 * 2. Redistributions in binary form must reproduce the above copyright
```

```
 * notice, this list of conditions and the following disclaimer in the
```

```
 * documentation and/or other materials provided with the distribution.
```

```
 *
```

```
 * THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY  
EXPRESS OR
```

```
 * IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED  
WARRANTIES
```

```
 * OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE  
DISCLAIMED.
```

```
 * IN NO EVENT SHALL THE AUTHOR BE LIABLE FOR ANY DIRECT, INDIRECT,
```

```
 * INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES  
(INCLUDING, BUT
```

```
 * NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES;  
LOSS OF USE,
```



\* DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY

\* THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT

\* (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF

\* THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

\*/

## Cyrus SASL 2.1.22

### Cyrus SASL Library

This product includes software developed by Computing Services at Carnegie Mellon University (<http://www.cmu.edu/computing/>). The Cyrus SASL Library was obtained under the following license:

```
/* CMU libsasl

* Tim Martin

* Rob Earhart

* Rob Siemborski

*/

/*

* Copyright (c) 1998-2003 Carnegie Mellon University. All rights reserved.

*

* Redistribution and use in source and binary forms, with or without

* modification, are permitted provided that the following conditions

* are met:

*

* 1. Redistributions of source code must retain the above copyright

* notice, this list of conditions and the following disclaimer.

*

* 2. Redistributions in binary form must reproduce the above copyright

* notice, this list of conditions and the following disclaimer in

* the documentation and/or other materials provided with the

* distribution.
```

- \*
  - \* 3. The name "Carnegie Mellon University" must not be used to
    - \* endorse or promote products derived from this software without
    - \* prior written permission. For permission or any other legal
    - \* details, please contact
      - \* Office of Technology Transfer
      - \* Carnegie Mellon University
      - \* 5000 Forbes Avenue
      - \* Pittsburgh, PA 15213-3890
      - \* (412) 268-4387, fax: (412) 268-7395
      - \* tech-transfer@andrew.cmu.edu
- \*
  - \* 4. Redistributions of any form whatsoever must retain the following
    - \* acknowledgment:
      - \* "This product includes software developed by Computing Services
      - \* at Carnegie Mellon University (<http://www.cmu.edu/computing/>)."
- \*
  - \* CARNEGIE MELLON UNIVERSITY DISCLAIMS ALL WARRANTIES WITH REGARD TO
    - \* THIS SOFTWARE, INCLUDING ALL IMPLIED WARRANTIES OF MERCHANTABILITY
    - \* AND FITNESS, IN NO EVENT SHALL CARNEGIE MELLON UNIVERSITY BE LIABLE
    - \* FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES
    - \* WHATSOEVER RESULTING FROM LOSS OF USE, DATA OR PROFITS, WHETHER IN

\* AN ACTION OF CONTRACT, NEGLIGENCE OR OTHER TORTIOUS ACTION,  
ARISING

\* OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THIS  
SOFTWARE.

\*/

## dom4j 1.5

Portions of this product include software developed by the DOM4J Project (<http://dom4j.org/>) and is distributed in accordance with the following license agreement.

### BSD style license

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

Redistributions of source code must retain copyright statements and notices. Redistributions must also contain a copy of this document.

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

The name "DOM4J" must not be used to endorse or promote products derived from this Software without prior written permission of MetaStuff, Ltd. For written permission, please contact [dom4j-info@metastuff.com](mailto:dom4j-info@metastuff.com).

Products derived from this Software may not be called "DOM4J" nor may "DOM4J" appear in their names without prior written permission of MetaStuff, Ltd. DOM4J is a registered trademark of MetaStuff, Ltd.

Due credit should be given to the DOM4J Project - <http://www.dom4j.org>

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

Copyright 2001-2005 (C) MetaStuff, Ltd. All Rights Reserved.

## Hibernate 3.2

### Hibernate 3.2

This product is distributed with Hibernate 3.2 (the LGPL Software), the use of which is governed by the following terms:

The LGPL Software is open source software that is used with this CA software program (the CA Product). The LGPL Software is not owned by CA, Inc. (?CA?). Use, copying, distribution and modification of the LGPL Software are governed by the GNU Lesser General Public License (?LGPL?) version 2.1. A copy of the LGPL license can be found in the same directory on the installation disk on which the LGPL Software is distributed. Additionally, a copy of the LGPL license can be found at <http://www.opensource.org/licenses/lgpl-2.1.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 LGPL Software available at <http://opensrcd.ca.com>, and includes a copy of the source code on the same disk as the executable code. Use of the CA Product 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 Product code except as may be expressly set forth in the EULA. The LGPL Software 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 LGPL Software 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 LGPL Software.

## ICU4C 3.4

Portions of this product include software developed by the International Business Machines Corporation. The IBM software is distributed in accordance with the following license agreement.

ICU License - ICU 1.8.1 and later

### COPYRIGHT AND PERMISSION NOTICE

Copyright (c) 1995-2003 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.

## JBoss 4.0.1 SP1

JBoss software is an open source library that is used with the software. The JBoss software is not owned by Computer Associates International, Inc. ( CA ). Use, copying, distribution and modification of the JBoss software are governed by the GNU Lesser General Public License ( LGPL ) version 2.1. A copy of the LGPL license can be found in the directory on the installation disk on which the JBoss software is distributed. Additionally, a copy of the LGPL license can be found at <http://opensource.org/licenses/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 JBoss software available at , and includes a copy of the source code on the same disk as the executable code. Use of the software is governed solely by the end user license agreement ( EULA ), not by the LGPL license. You cannot use, copy, modify or redistribute any code except as may be expressly set forth in the EULA. The JBoss software 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 JBoss software 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 JBoss software.



## JBoss Application Server v.4.2.3

This product is distributed with JBoss Application Server v.4.2.3 (the LGPL Software), the use of which is governed by the following terms:

The LGPL Software is open source software that is used with this CA software program (the CA Product). The LGPL Software is not owned by CA, Inc. (CA). Use, copying, distribution and modification of the LGPL Software are governed by the GNU Lesser General Public License (LGPL) version 2.1. A copy of the LGPL license can be found in the same directory on the installation disk on which the LGPL Software is distributed. Additionally, a copy of the LGPL license can be found at <http://www.opensource.org/licenses/lgpl-2.1.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 LGPL Software available at <http://opensrcd.ca.com>, and includes a copy of the source code on the same disk as the executable code. Use of the CA Product 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 Product code except as may be expressly set forth in the EULA. The LGPL Software 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 LGPL Software 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 LGPL Software.

## JBoss Native v.2.0.6

This product is distributed with JBoss Native v.2.0.6 (the LGPL Software), the use of which is governed by the following terms:

The LGPL Software is open source software that is used with this CA software program (the CA Product). The LGPL Software is not owned by CA, Inc. (CA). Use, copying, distribution and modification of the LGPL Software are governed by the GNU Lesser General Public License (LGPL) version 2.1. A copy of the LGPL license can be found in the same directory on the installation disk on which the LGPL Software is distributed. Additionally, a copy of the LGPL license can be found at <http://www.opensource.org/licenses/lgpl-2.1.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 LGPL Software available at <http://opensrcd.ca.com>, and includes a copy of the source code on the same disk as the executable code. Use of the CA Product 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 Product code except as may be expressly set forth in the EULA. The LGPL Software 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 LGPL Software 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 LGPL Software.

## JDOM 1.0

This product includes software developed by the JDOM Project (<http://www.jdom.org/>). The JDOM software is distributed in accordance with the following license agreement.

\$Id: LICENSE.txt,v 1.11 2004/02/06 09:32:57 jhunter Exp \$

Copyright (C) 2000-2004 Jason Hunter & Brett McLaughlin.

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 disclaimer that follows these conditions in the documentation and/or other materials provided with the distribution.
3. The name "JDOM" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact .
4. Products derived from this software may not be called "JDOM", nor

may "JDOM" appear in their name, without prior written permission from the JDOM Project Management .

In addition, we request (but do not require) that you include in the end-user documentation provided with the redistribution and/or in the software itself an acknowledgement equivalent to the following:

"This product includes software developed by the JDOM Project (<http://www.jdom.org/>)."

Alternatively, the acknowledgment may be graphical using the logos available at <http://www.jdom.org/images/logos>.

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

This software consists of voluntary contributions made by many individuals on behalf of the JDOM Project and was originally created by Jason Hunter and Brett McLaughlin . For more information on the JDOM Project, please see .

## MD5 Message Digest Algorithm

Portions of this product include the RSA Data Security, Inc. MD5 Message-Digest Algorithm. The RSA Data Security software is distributed in accordance with the following license agreement.

```
/* MD5.H - header file for MD5C.C
```

```
*/
```

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

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

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

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

Rivest

[Page 8]

RFC 1321

MD5 Message-Digest Algorithm

April 1992

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

\*/

## MIT Kerberos v5 r1.5

This product includes MIT Kerberos v5 r1.5, excluding the OpenVision Kerberos Administration System donated by Kerberos to MIT for inclusion in the standard Kerberos 5 distribution.

Kerberos Version 5, Release 1.5.3

Release Notes

The MIT Kerberos Team

Unpacking the Source Distribution

-----

The source distribution of Kerberos 5 comes in a gzipped tarfile, `krb5-1.5.3.tar.gz`. Instructions on how to extract the entire distribution follow.

If you have the GNU tar program and gzip installed, you can simply do:

```
gtar xzpf krb5-1.5.3.tar.gz
```

If you don't have GNU tar, you will need to get the FSF gzip distribution and use `gzcat`:

```
gzcat krb5-1.5.3.tar.gz | tar xpf -
```



Both of these methods will extract the sources into `krb5-1.5.3/src` and the documentation into `krb5-1.5.3/doc`.

## Building and Installing Kerberos 5

-----

The first file you should look at is `doc/install-guide.ps`; it contains the notes for building and installing Kerberos 5. The info file `krb5-install.info` has the same information in info file format. You can view this using the GNU emacs info-mode, or by using the standalone info file viewer from the Free Software Foundation. This is also available as an HTML file, `install.html`.

Other good files to look at are `admin-guide.ps` and `user-guide.ps`, which contain the system administrator's guide, and the user's guide, respectively. They are also available as info files `kerberos-admin.info` and `krb5-user.info`, respectively. These files are also available as HTML files.

If you are attempting to build under Windows, please see the `src/windows/README` file. Note that this release might not build under Windows currently.

## Reporting Bugs

-----

Please report any problems/bugs/comments using the krb5-send-pr program. The krb5-send-pr program will be installed in the sbin directory once you have successfully compiled and installed Kerberos V5 (or if you have installed one of our binary distributions).

If you are not able to use krb5-send-pr because you haven't been able to compile and install Kerberos V5 on any platform, you may send mail to [krb5-bugs@mit.edu](mailto:krb5-bugs@mit.edu).

You may view bug reports by visiting

<http://krbdev.mit.edu/rt/>

and logging in as "guest" with password "guest".

Major changes in krb5-1.5.3

-----

[5512] Fix MITKRB5-SA-2007-001: telnetd allows login as arbitrary user  
[CVE-2007-0956, VU#220816]

[5513] Fix MITKRB5-SA-2007-002: buffer overflow in krb5\_klog\_syslog  
[CVE-2007-0957, VU#704024]

[5520] Fix MITKRB5-SA-2007-003: double-free in kadmind - the RPC

library could perform a double-free due to a GSS-API library

bug [CVE-2007-1216, VU#419344]

krb5-1.5.3 changes by ticket ID

-----

5512 (krb5-1.5.x) MITKRB5-SA-2007-001: telnetd allows login as  
arbitrary user

5513 (krb5-1.5.x) MITKRB5-SA-2007-002: buffer overflow in  
krb5\_klog\_syslog

5520 (krb5-1.5.x) MITKRB5-SA-2007-003: double-free in kadmind

Major changes in krb5-1.5.2

-----

\* Fix for MITKRB5-SA-2006-002: the RPC library could call an  
uninitialized function pointer, which created a security  
vulnerability for kadmind.

\* Fix for MITKRB5-SA-2006-003: the GSS-API mechglue layer could fail  
to initialize some output pointers, causing callers to attempt to  
free uninitialized pointers. This caused a security vulnerability  
in kadmind.

## Major known bugs in krb5-1.5.2

-----

### 5293 crash creating db2 database in non-existent directory

Attempting to create a KDB in a non-existent directory using the Berkeley DB back end may cause a crash resulting from a null pointer dereference. If a core dump occurs, this may cause a local exposure of sensitive information such as a master key password. This will be fixed in an upcoming patch release.

## krb5-1.5.2 changes by ticket ID

-----

Listed below are the RT tickets of bugs fixed in krb5-1.5.2. Please see

<http://krbdev.mit.edu/rt/NoAuth/krb5-1.5/fixed-1.5.2.html>

for a current listing with links to the complete tickets.

- 3965 Autoconf 2.60 datarootdir issue
- 4237 windows ccache and keytab file paths without a prefix
- 4305 windows thread support frees thread local storage after TlsSetValue
- 4309 wix installer - win2k compatibility for netidmgr
- 4310 NSIS installer - update for Win2K NetIDMgr

- 4312 KFW 3.1 Beta 2 NetIDMgr Changes
- 4354 db2 policy database loading broken
- 4355 test policy dump/load in make check
- 4368 kdc: make\_toolong\_error does not initialize all fields for  
krb5\_mk\_error
- 4407 final commits for KFW 3.1 Beta 2
- 4499 Document prerequisites for make check
- 4500 Initialize buffer before calling res\_ninit
- 5307 fix MITKRB5-SA-2006-002 for 1.5-branch
- 5308 fix MITKRB5-SA-2006-003 for 1.5-branch

#### Major changes in 1.5.1

-----

The only significant change in krb5-1.5.1 is to fix the security vulnerabilities described in MITKRB5-SA-2006-001, which are local privilege escalation vulnerabilities in applications running on Linux and AIX.

#### krb5-1.5.1 changes by ticket ID

-----

Listed below are the RT tickets of bugs fixed in krb5-1.5.1. Please see

<http://krbdev.mit.edu/rt/NoAuth/krb5-1.5/fixed-1.5.1.html>

for a current listing with links to the complete tickets.

- 3904 fix uninitialized vars
- 3956 gssapi compilation errors on Windows
- 3971 broken configure test for dlopen
- 3998 Document add\_entry in ktutil man page
- 4012 reverse test for copy\_oid\_set in lib/gssapi/krb5/indicate\_mechs.c
- 4036 reject configure option for static libraries
- 4037 respect LDFLAGS in NetBSD build
- 4063 gss mech glue implementation should validate opaque pointer types
- 4088 gss\_import\_name can fail to call gssint\_initialize\_library()
- 4125 fix MITKRB5-SA-2006-001: multiple local privilege escalation vulnerabilities
- 4137 ksu spuriously fails when exiting shell when ksu-ing to non-root
- 4168 clean up mkrel patchlevel.h editing etc.

#### Major changes in 1.5

-----

Kerberos 5 Release 1.5 includes many significant changes to the Kerberos build system, to GSS-API, and to the Kerberos KDC and administration system. These changes build up infrastructure as part of our efforts to make Kerberos more extensible and flexible. While we are confident that these changes will improve Kerberos in the long

run, significant code restructuring may introduce portability problems or change behavior in ways that break applications. It is always important to test a new version of critical security software like Kerberos before deploying it in your environment to confirm that the new version meets your environment's requirements. Because of the significant restructuring, it is more important than usual to perform this testing and to report problems you find.

Highlights of major changes include:

- \* KDB abstraction layer, donated by Novell.
- \* plug-in architecture, allowing for extension modules to be loaded at run-time.
- \* multi-mechanism GSS-API implementation ("mechglue"), donated by Sun Microsystems
- \* Simple and Protected GSS-API negotiation mechanism ("SPNEGO") implementation, donated by Sun Microsystems
- \* Per-directory ChangeLog files have been deleted. Releases now include auto-generated revision history logs in the combined file doc/CHANGES.

## Changes by ticket ID

-----

Listed below are the RT tickets of bugs fixed in krb5-1.5. Please see

<http://krbdev.mit.edu/rt/NoAuth/krb5-1.5/fixed-1.5.html>

for a current listing with links to the complete tickets.

- 581    verify\_krb\_v4\_tgt is not 64-bit clean
- 856    patch to add shared library support for BSD/OS 4
- 1245    source tree not 64-bit clean
- 1288    v4 ticket file format incompatibilities
- 1431    fix errno.h references for cygwin
- 1434    use win32 rename solution in rcache for cygwin
- 1988    profile library fails to handle space in front of comments
- 2577    [Russ Allbery] Bug#250966: /usr/sbin/klogind: Authorization  
          behavior not fully documented
- 2615    Fwd: Patch for telnet / telnetd to avoid crashes when used  
          with MS kdc and PAC field
- 2628    Cygwin build patches
- 2648    [Russ Allbery] Bug#262192: libkrb53: krb\_get\_pw\_in\_tkt  
          problems with AFS keys
- 2712    whitespace patch for src/kdc/kerberos\_v4.c
- 2759    fake-getaddrinfo.h incorrectly checks for gethostbyname\_r errors



- 2761 move getaddrinfo hacks into support lib for easier maintenance
- 2763 file ccache should be held open while scanning for credentials
- 2786 dead code in init\_common() causes malloc(0)
- 2791 hooks for recording statistics on locking behavior
- 2807 Add VERSIONRC branding to krb5 support dll
- 2855 Possible thread safety issue in lib/krb5/os/def\_realm.c
- 2856 Need a function to clone krb5\_context structs for thread safe apps
- 2863 windows klist won't link
- 2880 fix calling convention for thread support fns
- 2882 Windows 2003 SP1 ktpass.exe generate keytab files fail to load with 1.4
- 2886 krb5\_do\_preauth could attempt to free NULL pointer
- 2931 implement SPNEGO
- 2932 implement multi-mech GSSAPI
- 2933 plug-in architecture
- 2936 supplementary error strings
- 2959 profile library should check high-resolution timestamps if available
- 2979 threaded test program built even with thread support disabled
- 3008 Incorrect cross-references in man pages
- 3010 Minor path and service man page fixes
- 3011 krb5-config should never return -I/usr/include
- 3013 Man pages for fakeka and krb524init
- 3014 texinfo variable fixes, info dir entries
- 3030 Bug report: Kinit has no suport for addresses in  
credentials. Kinit -a is not enabled.
- 3065 Implement RFC 3961 PRF

- 3086 [Sergio Gelato] Bug#311977: libkrb53: gss\_init\_sec\_context  
sometimes fails to initialise output\_token
- 3088 don't always require support library when building with sun cc
- 3122 fixes for AIX 5.2 select() and IPv4/IPv6 issues
- 3129 shlib build problems on HP-UX 10.20 with gcc-3.4.3
- 3233 kuserok needs to check for uid 99 on Mac OS X
- 3252 Tru64 compilation fails after k5-int.h/krb5.h changes
- 3266 Include errno.h in kdc/kerberos\_v4.c
- 3268 kprop should fall back on port 754 rather than failing
- 3269 telnet help should connect to a host named help
- 3308 kadmin.local is killed due to segmentation fault when  
principal name argument is missing.
- 3332 don't destroy uninitialized rcache mutex in error cases
- 3358 krb5 doesn't build when pthread\_mutexattr\_setrobust\_np is  
defined but not declared
- 3364 plugins should be thread-safe
- 3415 Windows 64-bit support
- 3416 tweak kdb interface for thread safety
- 3417 move/add thread support to support lib
- 3423 Add support for utmps interface on HP-UX 11.23
- 3426 trunk builds without thread support are not working
- 3434 sizeof type should be checked at compile time, not configure time
- 3438 enhancement: report errno when generic I/O errors happen in kinit
- 3445 args to ctype.h macros should be cast to unsigned char, not int
- 3466 ioctl header portability fixes for telnet on GNU/kFreeBSD

- 3467 Allow GSS\_C\_NO\_OID in krb5\_gss\_canon\_name
- 3468 udp\_preference\_limit typo in krb5.conf man page
- 3490 getpwnam\_r status checked incorrectly
- 3502 Cannot acquire initiator cred using gss\_acquire\_cred with  
explicit name on Windows
- 3512 updates to NSIS installer for KFW
- 3521 Add configurable Build value to File and Product versions for Windows
- 3549 library double-free with an empty keytab
- 3607 clients/ksu/setenv.c doesn't build on Solaris
- 3620 use strerror\_r
- 3668 Prototype for krb5\_c\_prf missing const
- 3671 shsUpdate should take an unsigned int for length
- 3675 unsigned/signed int warnings in krb5\_context variables.
- 3687 initialize cc\_version to 0 not NULL
- 3688 Added CoreFoundation bundle plugin support
- 3689 build kadm5 headers in generate-files-mac target
- 3690 build rpc includes in generate-files-mac target.
- 3697 kadmin hangs indefinitely when admin princ has escaped chars
- 3706 ipv4+ipv6 messages can trip up KDC replay detection
- 3714 fix incorrect padata memory allocation in send\_tgs.c
- 3716 Plugin search algorithm should take lists of name and directories
- 3719 fix bug in flag checking in libdb2 mpool code
- 3724 need to export kadm5\_set\_use\_password\_server
- 3736 Cleanup a number of cast away from const warnings in gssapi
- 3739 vsnprintf not present on windows

- 3746 krb5\_cc\_gen\_new memory implementation doesn't create a new ccache
- 3761 combine kdc.conf, krb5.conf data in KDC programs
- 3783 install headers into include/krb5
- 3790 memory leak in GSSAPI credential releasing code
- 3791 memory leak in gss\_krb5\_set\_allowable\_etypes error path
- 3825 krb5int\_get\_plugin\_dir\_data() uses + instead of \* in realloc
- 3826 memory leaks in krb5kdc due to not freeing error messages
- 3854 CCAPI krb4int\_save\_credentials\_addr should match prototype
- 3866 gld --as-needed not portable enough
- 3879 Update texinfo.tex
- 3888 ftpd's getline conflicts with current glibc headers
- 3898 Export gss\_inquire\_mechs\_for\_name for KFW
- 3899 Export krb5\_gss\_register\_acceptor\_identity in KFW
- 3900 update config.guess and config.sub
- 3902 g\_userok.c has implicit declaration of strlen
- 3903 various kadm5 files need string.h
- 3905 warning fixes for spnego
- 3909 Plugins need to use RTLD\_GROUP when available, but definitely  
not RTLD\_GLOBAL
- 3910 fix parallel builds for libgss
- 3911 getaddrinfo code uses vars outside of storage duration
- 3918 fix warnings for lib/gssapi/mechglue/g\_initialize.c
- 3920 cease export of krb5\_gss\_\*
- 3921 remove unimplemented/unused mechglue functions
- 3922 mkrel should update patchlevel.h prior to reconf

- 3923 implement RFC4120 behavior on TCP requests with high bit set in length
- 3924 the `krb5_get_server_rcache` routine frees already freed memory  
in error path
- 3925 `krb5_get_profile` should reflect profile in the supplied context
- 3927 fix signedness warnings in `spnego_mech.c`
- 3928 fix typo in `MS_BUG_TEST` case in `krb5_gss_glue.c`
- 3940 Disable MSLSA: ccache in WOW64 on pre-Vista Beta 2 systems
- 3942 make `gssint_get_mechanism` match prototype
- 3944 write svn log output when building release
- 3945 `mkrel` should only generate `doc/CHANGES` for checkouts
- 3948 Windows: fix `krb5.h` generation
- 3949 fix `plugin.c` to compile on Windows
- 3950 `autoconf 2.60` compatibility
- 3951 remove unused `dlopen` code in `lib/gssapi/mechglue/g_initialize.c`
- 3952 fix calling convention for `krb5` error-message routines,  
document usage of `krb5_get_error_message`
- 3953 `t_std_conf` references private function due to explicit linking  
of `init_os_ctx.o`
- 3954 remove `mechglue` `gss_config`'s `gssint_userok` and `pname_to_uid`
- 3957 remove unused `lib/gssapi/mechglue/g_utils.c`
- 3959 re-order inclusions in `spnego_mech.c` to avoid breaking system headers
- 3962 `krb5_get_server_rcache` double free
- 3964 "`kdb5_util load`" to existing db doesn't work, needed for `kpropd`
- 3968 fix memory leak in `mechglue/g_init_sec_ctx.c`
- 3970 test `kdb5_util dump/load` functionality in `dejagnu`

3972 make gss\_unwrap match prototype

3974 work around failure to load into nonexistent db

Known bugs by ticket ID:

-----

Listed below are the RT tickets for known bugs in krb5-1.5. Please  
see

<http://krbdev.mit.edu/rt/NoAuth/krb5-1.5/bugs-1.5.html>

for an up-to-date list, including links to the complete tickets.

3947 allow multiple calls to krb5\_get\_error\_message to retrieve message

3956 gssapi compilation errors on Windows

3973 kdb5\_util load now fails if db doesn't exist [workaround]

Copyright Notice and Legal Administrivia

-----

Copyright (C) 1985-2007 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).

----

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 implementations of GSSAPI mechglue in GSSAPI-SPNEGO in `src/lib/gssapi`, including the following files:

`lib/gssapi/generic/gssapi_err_generic.et`

`lib/gssapi/mechglue/g_accept_sec_context.c`

lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c  
lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inq\_context.c  
lib/gssapi/mechglue/g\_inq\_cred.c  
lib/gssapi/mechglue/g\_inq\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c

lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

are subject to the following license:

Copyright (c) 2004 Sun Microsystems, Inc.

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

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

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS

OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF

MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND  
NONINFRINGEMENT.

IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR  
ANY

CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF  
CONTRACT,

TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE  
SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

#### Acknowledgments

-----

Thanks to Russ Allbery for contributing and integrating patches from  
Debian and other places.

Thanks to Michael Calmer for contributing patches for code clean-up.

Thanks to Novell for donating the KDB abstraction layer.

Thanks to Sun Microsystems for donating their implementations of  
mechglue and SPNEGO.

Thanks to the numerous others who reported bugs and/or contributed  
patches.

Thanks to iDefense for notifying us about the vulnerability in  
MITKRB5-SA-2007-002.

Thanks to the members of the Kerberos V5 development team at MIT, both past and present: Danilo Almeida, Jeffrey Altman, Justin Anderson, Richard Basch, Jay Berkenbilt, Mitch Berger, Andrew Boardman, Joe Calzaretta, John Carr, Don Davis, Alexandra Ellwood, Nancy Gilman, Matt Hancher, Sam Hartman, Paul Hill, Marc Horowitz, Eva Jacobus, Miroslav Jurisic, Barry Jaspan, Geoffrey King, Kevin Koch, John Kohl, Peter Litwack, Scott McGuire, Kevin Mitchell, Cliff Neuman, Paul Park, Ezra Peisach, Chris Provenzano, Ken Raeburn, Jon Rochlis, Jeff Schiller, Jen Selby, Brad Thompson, Harry Tsai, Ted Ts'o, Marshall Vale, Tom Yu.

## nss\_ldap 2.62

This product includes Heimdal software distributed pursuant to the following terms:

### GNU LESSER GENERAL PUBLIC LICENSE

Version 3, 29 June 2007

Copyright (C) 2007 Free Software Foundation, Inc.

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

This version of the GNU Lesser General Public License incorporates the terms and conditions of version 3 of the GNU General Public License, supplemented by the additional permissions listed below.

#### 0. Additional Definitions.

As used herein, "this License" refers to version 3 of the GNU Lesser General Public License, and the "GNU GPL" refers to version 3 of the GNU General Public License.

"The Library" refers to a covered work governed by this License, other than an Application or a Combined Work as defined below.

An "Application" is any work that makes use of an interface provided

by the Library, but which is not otherwise based on the Library.

Defining a subclass of a class defined by the Library is deemed a mode of using an interface provided by the Library.

A "Combined Work" is a work produced by combining or linking an Application with the Library. The particular version of the Library with which the Combined Work was made is also called the "Linked Version".

The "Minimal Corresponding Source" for a Combined Work means the Corresponding Source for the Combined Work, excluding any source code for portions of the Combined Work that, considered in isolation, are based on the Application, and not on the Linked Version.

The "Corresponding Application Code" for a Combined Work means the object code and/or source code for the Application, including any data and utility programs needed for reproducing the Combined Work from the Application, but excluding the System Libraries of the Combined Work.

#### 1. Exception to Section 3 of the GNU GPL.

You may convey a covered work under sections 3 and 4 of this License without being bound by section 3 of the GNU GPL.

#### 2. Conveying Modified Versions.



If you modify a copy of the Library, and, in your modifications, a facility refers to a function or data to be supplied by an Application that uses the facility (other than as an argument passed when the facility is invoked), then you may convey a copy of the modified version:

- a) under this License, provided that you make a good faith effort to ensure that, in the event an Application does not supply the function or data, the facility still operates, and performs whatever part of its purpose remains meaningful, or
- b) under the GNU GPL, with none of the additional permissions of this License applicable to that copy.

### 3. Object Code Incorporating Material from Library Header Files.

The object code form of an Application may incorporate material from a header file that is part of the Library. You may convey such object code under terms of your choice, provided that, if the incorporated material is not limited to numerical parameters, data structure layouts and accessors, or small macros, inline functions and templates (ten or fewer lines in length), you do both of the following:

- a) Give prominent notice with each copy of the object code that the

Library is used in it and that the Library and its use are covered by this License.

b) Accompany the object code with a copy of the GNU GPL and this license document.

#### 4. Combined Works.

You may convey a Combined Work under terms of your choice that, taken together, effectively do not restrict modification of the portions of the Library contained in the Combined Work and reverse engineering for debugging such modifications, if you also do each of the following:

a) Give prominent notice with each copy of the Combined Work that the Library is used in it and that the Library and its use are covered by this License.

b) Accompany the Combined Work with a copy of the GNU GPL and this license document.

c) For a Combined Work that displays copyright notices during execution, include the copyright notice for the Library among these notices, as well as a reference directing the user to the copies of the GNU GPL and this license document.

d) Do one of the following:

0) Convey the Minimal Corresponding Source under the terms of this License, and the Corresponding Application Code in a form suitable for, and under terms that permit, the user to recombine or relink the Application with a modified version of the Linked Version to produce a modified Combined Work, in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.

1) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (a) uses at run time a copy of the Library already present on the user's computer system, and (b) will operate properly with a modified version of the Library that is interface-compatible with the Linked Version.

e) Provide Installation Information, but only if you would otherwise be required to provide such information under section 6 of the GNU GPL, and only to the extent that such information is necessary to install and execute a modified version of the Combined Work produced by recombining or relinking the Application with a modified version of the Linked Version. (If you use option 4d0, the Installation Information must accompany

the Minimal Corresponding Source and Corresponding Application Code. If you use option 4d1, you must provide the Installation Information in the manner specified by section 6 of the GNU GPL for conveying Corresponding Source.)

#### 5. Combined Libraries.

You may place library facilities that are a work based on the Library side by side in a single library together with other library facilities that are not Applications and are not covered by this License, and convey such a combined library under terms of your choice, if you do both of the following:

- a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities, conveyed under the terms of this License.
- b) Give prominent notice with the combined library that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

#### 6. Revised Versions of the GNU Lesser General Public License.

The Free Software Foundation may publish revised and/or new versions of the GNU Lesser General Public License from time to time. Such new

versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library as you received it specifies that a certain numbered version of the GNU Lesser General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that published version or of any later version published by the Free Software Foundation. If the Library as you received it does not specify a version number of the GNU Lesser General Public License, you may choose any version of the GNU Lesser General Public License ever published by the Free Software Foundation.

If the Library as you received it specifies that a proxy can decide whether future versions of the GNU Lesser General Public License shall apply, that proxy's public statement of acceptance of any version is permanent authorization for you to choose that version for the Library.

## Oracle JDBC Driver 10g Release 2 (10.2.0.1.0)

ORACLE TECHNOLOGY NETWORK

DEVELOPMENT AND DISTRIBUTION LICENSE AGREEMENT

"We," "us," and "our" refers to Oracle USA, Inc., for and on behalf of itself and its subsidiaries and affiliates under common control. "You" and "your" refers to the individual or entity that wishes to use the programs from Oracle. "Programs" refers to the software product you wish to download and use and program documentation. "License" refers to your right to use the programs under the terms of this agreement. This agreement is governed by the substantive and procedural laws of California. You and Oracle agree to submit to the exclusive jurisdiction of, and venue in, the courts of San Francisco, San Mateo, or Santa Clara counties in California in any dispute arising out of or relating to this agreement.

We are willing to license the programs to you only upon the condition that you accept all of the terms contained in this agreement. Read the terms carefully and select the "Accept" button at the bottom of the page to confirm your acceptance. If you are not willing to be bound by these terms, select the "Do Not Accept" button and the registration process will not continue.

### License Rights

We grant you a nonexclusive, nontransferable limited license to use the programs for purposes of developing your applications. You may also distribute the programs with your applications to your customers. If you want to use the programs for any purpose other than as expressly permitted under this agreement you must contact us, or an Oracle reseller, to obtain the appropriate license. We may audit your use of the programs. Program documentation is either shipped with the programs, or documentation may be accessed online at <http://otn.oracle.com/docs>.

### Ownership and Restrictions

We retain all ownership and intellectual property rights in the programs. You may make a sufficient number of copies of the programs for the licensed use and one copy of the programs for backup purposes.

You may not:

- use the programs for any purpose other than as provided above;
- distribute the programs unless accompanied with your applications;
- charge your end users for use of the programs;
- remove or modify any program markings or any notice of our proprietary rights;
- use the programs to provide third party training on the content and/or functionality of the programs, except for training your licensed users;
- assign this agreement or give the programs, program access or an interest in the programs to any individual or entity except as provided under this agreement;
- cause or permit reverse engineering (unless required by law for interoperability), disassembly or decompilation of the programs;
- disclose results of any program benchmark tests without our prior consent; or,
- use any Oracle name, trademark or logo.

#### Program Distribution

We grant you a nonexclusive, nontransferable right to copy and distribute the programs to your end users provided that you do not charge your end users for use of the programs and provided your end users may only use the programs to run your applications for their business operations. Prior to distributing the programs you shall require your end users to execute an agreement binding them to terms consistent with those contained in this section and the sections of this agreement entitled "License Rights," "Ownership and Restrictions," "Export," "Disclaimer of Warranties and Exclusive Remedies," "No Technical Support," "End of Agreement," "Relationship Between the Parties," and "Open Source." You must also include a provision stating that your end users shall have no right to distribute the programs, and a provision specifying us as a third party beneficiary of the agreement. You are responsible for obtaining these agreements with your end users.

You agree to: (a) defend and indemnify us against all claims and damages caused by your distribution of the programs in breach of this agreements and/or failure to include the required contractual provisions in your end user agreement as stated above; (b) keep executed end user agreements and records of end user information including name, address, date of distribution and identity of programs distributed; (c) allow us to inspect your end user agreements and records upon request; and, (d) enforce the terms of your end user agreements so as to effect a timely cure of any end user breach, and to notify us of any breach of the terms.

#### Export

You agree that U.S. export control laws and other applicable export and import laws govern your use of the programs, including technical data; additional information can be found on Oracle's Global Trade Compliance web site located at <http://www.oracle.com/products/export/index.html?content.html>. You agree that neither the programs nor any direct product thereof will be exported, directly, or indirectly, in violation of these laws, or will be used for any purpose prohibited by these laws including, without limitation, nuclear, chemical, or biological weapons proliferation.

#### Disclaimer of Warranty and Exclusive Remedies

THE PROGRAMS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. WE FURTHER DISCLAIM ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT.

IN NO EVENT SHALL WE BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, OR DAMAGES FOR LOSS OF PROFITS, REVENUE, DATA OR DATA USE, INCURRED BY YOU OR ANY THIRD PARTY, WHETHER IN AN ACTION IN CONTRACT OR TORT, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. OUR ENTIRE LIABILITY FOR DAMAGES HEREUNDER SHALL IN NO EVENT EXCEED ONE THOUSAND DOLLARS (U.S. \$1,000).

#### No Technical Support

Our technical support organization will not provide technical support, phone support, or updates to you for the programs licensed under this agreement.



## Restricted Rights

If you distribute a license to the United States government, the programs, including documentation, shall be considered commercial computer software and you will place a legend, in addition to applicable copyright notices, on the documentation, and on the media label, substantially similar to the following:

### NOTICE OF RESTRICTED RIGHTS

"Programs delivered subject to the DOD FAR Supplement are 'commercial computer software' and use, duplication, and disclosure of the programs, including documentation, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement. Otherwise, programs delivered subject to the Federal Acquisition Regulations are 'restricted computer software' and use, duplication, and disclosure of the programs, including documentation, shall be subject to the restrictions in FAR 52.227-19, Commercial Computer Software-Restricted Rights (June 1987). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065."

## End of Agreement

You may terminate this agreement by destroying all copies of the programs. We have the right to terminate your right to use the programs if you fail to comply with any of the terms of this agreement, in which case you shall destroy all copies of the programs.

## Relationship Between the Parties

The relationship between you and us is that of licensee/licensor. Neither party will represent that it has any authority to assume or create any obligation, express or implied, on behalf of the other party, nor to represent the other party as agent, employee, franchisee, or in any other capacity. Nothing in this agreement shall be construed to limit either party's right to independently develop or distribute software that is functionally similar to the other party's products, so long as proprietary information of the other party is not included in such software.

## Open Source

"Open Source" software - software available without charge for use, modification and distribution - is often licensed under terms that require the user to make the user's modifications to the Open Source software or any software that the user 'combines' with the Open Source software freely available in source code form. If you use Open Source software in conjunction with the programs, you must ensure that your use does not: (i) create, or purport to create, obligations of us with respect to the Oracle programs; or (ii) grant, or purport to grant, to any third party any rights to or immunities under our intellectual property or proprietary rights in the Oracle programs. For example, you may not develop a software program using an Oracle program and an Open Source program where such use results in a program file(s) that contains code from both the Oracle program and the Open Source program (including without limitation libraries) if the Open Source program is licensed under a license that requires any "modifications" be made freely available. You also may not combine the Oracle program with programs licensed under the GNU General Public License ("GPL") in any manner that could cause, or could be interpreted or asserted to cause, the Oracle program or any modifications thereto to become subject to the terms of the GPL.

#### Entire Agreement

You agree that this agreement is the complete agreement for the programs and licenses, and this agreement supersedes all prior or contemporaneous agreements or representations. If any term of this agreement is found to be invalid or unenforceable, the remaining provisions will remain effective.

Last updated: 03/09/05

## 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. Phone: +44 1223 334714.

Copyright (c) 1997-2006 University of Cambridge

All rights reserved.

### THE C++ WRAPPER FUNCTIONS

-----

Contributed by: Google Inc.

Copyright (c) 2006, 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

## Rhino 1.6r4

The source code version of Rhino 1.6 Release 4 is licensed under the Mozilla  
Public License Version 1.1 which can be found at <http://www.mozilla.org/MPL/>  
and is made available for download from  
[http://opensrcd.ca.com/ips/P02056\\_4/](http://opensrcd.ca.com/ips/P02056_4/).

## SAXPath 1

This product includes software developed by the SAXPath Project (<http://www.saxpath.org/>). The SAXPath software is distributed in accordance with the following license agreement.

/\*--

\$Id: LICENSE,v 1.1 2002/04/26 17:43:56 jstrachan Exp \$

Copyright (C) 2000-2002 werken digital.

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 disclaimer that follows these conditions in the documentation and/or other materials provided with the distribution.
3. The name "SAXPath" must not be used to endorse or promote products derived from this software without prior written permission. For

written permission, please contact [license@saxpath.org](mailto:license@saxpath.org).

4. Products derived from this software may not be called "SAXPath", nor may "SAXPath" appear in their name, without prior written permission from the SAXPath Project Management ([pm@saxpath.org](mailto:pm@saxpath.org)).

In addition, we request (but do not require) that you include in the end-user documentation provided with the redistribution and/or in the software itself an acknowledgement equivalent to the following:

"This product includes software developed by the  
SAXPath Project (<http://www.saxpath.org/>)."

Alternatively, the acknowledgment may be graphical using the logos available at <http://www.saxpath.org/>

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

OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This software consists of voluntary contributions made by many individuals on behalf of the SAXPath Project and was originally created by bob mcwhirter and James Strachan . For more information on the SAXPath Project, please see .

\*/



## SHA-1

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

Copyright (C) The Internet Society (2001). All Rights Reserved.

This document and translations of it may be copied and furnished to others, and derivative works that comment on or otherwise explain it or assist in its implementation may be prepared, copied, published and distributed, in whole or in part, without restriction of any kind, provided that the above copyright notice and this paragraph are included on all such copies and derivative works. However, this document itself may not be modified in any way, such as by removing the copyright notice or references to the Internet Society or other Internet organizations, except as needed for the purpose of developing Internet standards in which case the procedures for copyrights defined in the Internet Standards process must be followed, or as required to translate it into languages other than English.

The limited permissions granted above are perpetual and will not be revoked by the Internet Society or its successors or assigns.

This document and the information contained herein is provided on an "AS IS" basis and THE INTERNET SOCIETY AND THE INTERNET ENGINEERING TASK FORCE DISCLAIMS ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY THAT THE USE OF THE INFORMATION HEREIN WILL NOT INFRINGE ANY RIGHTS OR ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

## Sun JDK 1.4.2\_13

This Product is distributed with Sun JRE 1.4.2\_13 (JAVATM2 RUNTIME ENVIRONMENT (J2RE), VERSION 1.4.2\_13) (Sun JRE). The Sun JRE is distributed in accordance with the Sun Microsystems, Inc. (Sun) Binary Code License Agreement set forth below. As noted in Section F of the Supplemental License Terms of this license, Sun has provided additional copyright notices and license terms that may be applicable to portions of the Sun JRE in the THIRDPARTYLICENSEREADME.txt file that accompanies the Sun JRE.

### LICENSE:

Sun Microsystems, Inc.

Binary Code License Agreement

for the

JAVATM 2 RUNTIME ENVIRONMENT (J2RE), STANDARD EDITION, VERSION 1.4.2\_X

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE

IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE

TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL

LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT

CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE

TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT"

BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND

BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON AT THE BOTTOM OF THE

AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT CONTINUE.

1.DEFINITIONS. "Software" means the identified above in binary form, any other machine readable materials (including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Sun, and any user manuals, programming guides and other documentation provided to you by Sun under this Agreement. "Programs" mean Java applets and applications intended to run on the Java 2 Platform, Standard Edition (J2SETM platform) platform on Java-enabled general purpose desktop computers and servers.

2.LICENSE TO USE. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of the Supplemental License Terms, Sun grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally Software complete and unmodified for the sole purpose of running Programs. Additional licenses for developers and/or publishers are granted in the Supplemental License Terms.

3.RESTRICTIONS. Software is confidential and copyrighted. Title to Software and all associated intellectual property rights is retained by Sun and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or reverse engineer Software. You acknowledge that Licensed Software is not designed or intended for use in the design, construction, operation or maintenance of any nuclear facility. Sun Microsystems, Inc. disclaims any express or implied

warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Sun or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.

4.LIMITED WARRANTY. Sun warrants to you that for a period of ninety (90) days from the date of purchase, as evidenced by a copy of the receipt, the media on which Software is furnished (if any) will be free of defects in materials and workmanship under normal use. Except for the foregoing, Software is provided "AS IS". Your exclusive remedy and Sun's entire liability under this limited warranty will be at Sun's option to replace Software media or refund the fee paid for Software. Any implied warranties on the Software are limited to 90 days. Some states do not allow limitations on duration of an implied warranty, so the above may not apply to you. This limited warranty gives you specific legal rights. You may have others, which vary from state to state.

5.DISCLAIMER OF WARRANTY. UNLESS SPECIFIED IN THIS AGREEMENT, ALL EXPRESS

OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY

IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR

NON-INFRINGEMENT ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT THESE DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

6.LIMITATION OF LIABILITY. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR

DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE

DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT

OF OR RELATED TO THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF SUN HAS

BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event will Sun's liability to you, whether in contract, tort (including negligence), or otherwise, exceed the amount paid by you for Software under this Agreement. The foregoing limitations will apply even if the above stated warranty fails of its essential purpose. Some states do not allow the exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

7.SOFTWARE UPDATES FROM SUN. You acknowledge that at your request or consent optional features of the Software may download, install, and execute applets, applications, software extensions, and updated versions of the Software from Sun ("Software Updates"), which may require you to accept updated terms and conditions for installation. If additional terms and conditions are not presented on installation, the Software Updates will be considered part of the Software and subject to the terms and conditions of the Agreement.

8.SOFTWARE FROM SOURCES OTHER THAN SUN. You acknowledge that, by your use

of optional features of the Software and/or by requesting services that require use of the optional features of the Software, the Software may automatically download, install, and execute software applications from sources other than Sun ("Other Software"). Sun makes no representations of a relationship of any kind to licensors of Other Software. TO THE EXTENT

NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR

ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL,

INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF

LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE

OTHER SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH

DAMAGES. Some states do not allow the exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

9.TERMINATION. This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Sun if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon Termination, you must destroy all copies of Software.

10.EXPORT REGULATIONS. All Software and technical data delivered under this Agreement are subject to US export control laws and may be subject to export or import regulations in other countries. You agree to comply strictly with all such laws and regulations and acknowledge that you have the responsibility to obtain such licenses to export, re-export, or import as may be required after delivery to you.

11.TRADEMARKS AND LOGOS. You acknowledge and agree as between you and Sun that Sun owns the SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET trademarks and all SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET-related trademarks, service marks, logos and other brand designations ("Sun Marks"), and you agree to comply with the Sun Trademark and Logo Usage Requirements currently located at <http://www.sun.com/policies/trademarks>. Any use you make of the Sun Marks inures to Sun's benefit.

12.U.S. GOVERNMENT RESTRICTED RIGHTS. If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation will be only as set forth in this Agreement; this is in accordance with 48 CFR 227.7201 through 227.7202-4 (for Department of Defense (DOD) acquisitions) and with 48 CFR 2.101 and 12.212 (for non-DOD acquisitions).

13.GOVERNING LAW. Any action related to this Agreement will be governed by California law and controlling U.S. federal law. No choice of law rules of

any jurisdiction will apply.

14.SEVERABILITY. If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

15.INTEGRATION. This Agreement is the entire agreement between you and Sun relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

#### SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement. Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in the Binary Code License Agreement . These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.



A. Software Internal Use and Development License Grant. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified (unless otherwise specified in the applicable README file) for the purpose of designing, developing, and testing your Programs.

B. License to Distribute Software. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you distribute the Software complete and unmodified (unless otherwise specified in the applicable README file) and only bundled as part of, and for the sole purpose of running, your Programs, (ii) the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software (unless otherwise specified in the applicable README file), (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that protects Sun's interests consistent with the terms contained in this Agreement, and (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit

or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

C. License to Distribute Redistributables. Subject to the terms and conditions of this Agreement, including but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute those files specifically identified as redistributable in the Software "README" file ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified (unless otherwise specified in the applicable README file), and only bundled as part of Programs, (ii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable README file), (iii) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (iv) you only distribute the Redistributables pursuant to a license agreement that protects Sun's interests consistent with the terms contained in the Agreement, (v) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

D. Java Technology Restrictions. You may not modify the Java Platform

Interface ("JPI", identified as classes contained within the "java" package or any subpackages of the "java" package), by creating additional classes within the JPI or otherwise causing the addition to or modification of the classes in the JPI. In the event that you create an additional class and associated API(s) which (i) extends the functionality of the Java platform, and (ii) is exposed to third party software developers for the purpose of developing additional software which invokes such additional API, you must promptly publish broadly an accurate specification for such API for free use by all developers. You may not create, or authorize your licensees to create, additional classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun" or similar convention as specified by Sun in any naming convention designation.

E.Source Code. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.

F.Third Party Code. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME.txt file. In addition to any terms and conditions of any third party opensource/freeware license identified in the THIRDPARTYLICENSEREADME.txt file, the disclaimer of warranty and limitation of liability provisions in paragraphs 5 and 6 of the Binary

Code License Agreement shall apply to all Software in this distribution.

For inquiries please contact: Sun Microsystems, Inc., 4150 Network Circle,  
Santa Clara, California 95054, U.S.A.

(LFI#135955/Form ID#011801)

## Sun JDK 1.6.0

This Product is distributed with Sun JDK 1.6.0 (JAVA SE DEVELOPMENT KIT (JDK), VERSION 6) (Sun JDK). The Sun JDK is distributed in accordance with the Sun Microsystems, Inc. (Sun) Binary Code License Agreement set forth below. As noted in Section G of the Supplemental License Terms of this license, Sun has provided additional copyright notices and license terms that may be applicable to portions of the Sun JDK in the THIRDPARTYLICENSEREADME.txt file that accompanies the Sun JDK.

Sun Microsystems, Inc. Binary Code License Agreement

for the JAVA SE DEVELOPMENT KIT (JDK), VERSION 6

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON AT THE BOTTOM OF THE AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT CONTINUE.

1. DEFINITIONS. "Software" means the identified above in binary form, any other machine readable materials

(including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Sun, and any user manuals, programming guides and other documentation provided to you by Sun under this Agreement.

"Programs" mean Java applets and applications intended to run on the Java Platform, Standard Edition (Java SE) on Java-enabled general purpose desktop computers and servers.

2. LICENSE TO USE. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of the Supplemental License Terms, Sun grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally Software complete and unmodified for the sole purpose of running Programs. Additional licenses for developers and/or publishers are granted in the Supplemental License Terms.

3. RESTRICTIONS. Software is confidential and copyrighted. Title to Software and all associated intellectual property rights is retained by Sun and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or

reverse engineer Software. You acknowledge that Licensed Software is not designed or intended for use in the design, construction, operation or maintenance of any nuclear facility. Sun Microsystems, Inc. disclaims any express or implied warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Sun or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.

4. LIMITED WARRANTY. Sun warrants to you that for a period of ninety (90) days from the date of purchase, as evidenced by a copy of the receipt, the media on which Software is furnished (if any) will be free of defects in materials and workmanship under normal use. Except for the foregoing, Software is provided "AS IS". Your exclusive remedy and Sun's entire liability under this limited warranty will be at Sun's option to replace Software media or refund the fee paid for Software. Any implied warranties on the Software are limited to 90 days. Some states do not allow limitations on duration of an implied warranty, so the above may not apply to you. This limited warranty

gives you specific legal rights. You may have others,  
which vary from state to state.

5. DISCLAIMER OF WARRANTY. UNLESS SPECIFIED IN THIS AGREEMENT, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT THESE DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

6. LIMITATION OF LIABILITY. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. In no event will Sun's liability to you, whether in contract, tort (including negligence), or otherwise, exceed the amount paid by you for Software under this Agreement. The foregoing limitations will apply even if the above stated warranty fails of its essential purpose. Some states do not allow the



exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

7. TERMINATION. This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Sun if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon Termination, you must destroy all copies of Software.

8. EXPORT REGULATIONS. All Software and technical data delivered under this Agreement are subject to US export control laws and may be subject to export or import regulations in other countries. You agree to comply strictly with all such laws and regulations and acknowledge that you have the responsibility to obtain such licenses to export, re-export, or import as may be required after delivery to you.

9. TRADEMARKS AND LOGOS. You acknowledge and agree as

between you and Sun that Sun owns the SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET trademarks and all SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET-related trademarks, service marks, logos and other brand designations ("Sun Marks"), and you agree to comply with the Sun Trademark and Logo Usage Requirements currently located at <http://www.sun.com/policies/trademarks>. Any use you make of the Sun Marks inures to Sun's benefit.

10. U.S. GOVERNMENT RESTRICTED RIGHTS. If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation will be only as set forth in this Agreement; this is in accordance with 48 CFR 227.7201 through 227.7202-4 (for Department of Defense (DOD) acquisitions) and with 48 CFR 2.101 and 12.212 (for non-DOD acquisitions).

11. GOVERNING LAW. Any action related to this Agreement will be governed by California law and controlling U.S. federal law. No choice of law rules of any jurisdiction will apply.

12. SEVERABILITY. If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

13. INTEGRATION. This Agreement is the entire agreement between you and Sun relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

#### SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement.

Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in

the Binary Code License Agreement . These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.

A. Software Internal Use and Development License Grant. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software "README" file incorporated herein by reference, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified for the purpose of designing, developing, and testing your Programs.

B. License to Distribute Software. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software README file, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you

distribute the Software complete and unmodified and only bundled as part of, and for the sole purpose of running, your Programs, (ii) the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software, (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that protects Sun's interests consistent with the terms contained in this Agreement, and (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

C. License to Distribute Redistributables. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software README file, including but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable,

limited license without fees to reproduce and distribute those files specifically identified as redistributable in the Software "README" file ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified, and only bundled as part of Programs, (ii) the Programs add significant and primary functionality to the Redistributables, (iii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable README file), (iv) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (v) you only distribute the Redistributables pursuant to a license agreement that protects Sun's interests consistent with the terms contained in the Agreement, (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

D. Java Technology Restrictions. You may not create,

modify, or change the behavior of, or authorize your licensees to create, modify, or change the behavior of, classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun" or similar convention as specified by Sun in any naming convention designation.

E. Distribution by Publishers. This section pertains to your distribution of the Software with your printed book or magazine (as those terms are commonly used in the industry) relating to Java technology ("Publication"). Subject to and conditioned upon your compliance with the restrictions and obligations contained in the Agreement, in addition to the license granted in Paragraph 1 above, Sun hereby grants to you a non-exclusive, nontransferable limited right to reproduce complete and unmodified copies of the Software on electronic media (the "Media") for the sole purpose of inclusion and distribution with your Publication(s), subject to the following terms: (i) You may not distribute the Software on a stand-alone basis; it must be distributed with your Publication(s); (ii) You are responsible for downloading the Software from the applicable Sun web site; (iii) You must refer to the Software as Java™

SE Development Kit 6; (iv) The Software must be reproduced in its entirety and without any modification whatsoever (including, without limitation, the Binary Code License and Supplemental License Terms accompanying the Software and proprietary rights notices contained in the Software); (v) The Media label shall include the following information: Copyright 2006, Sun Microsystems, Inc. All rights reserved. Use is subject to license terms. Sun, Sun Microsystems, the Sun logo, Solaris, Java, the Java Coffee Cup logo, J2SE, and all trademarks and logos based on Java are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. This information must be placed on the Media label in such a manner as to only apply to the Sun Software; (vi) You must clearly identify the Software as Sun's product on the Media holder or Media label, and you may not state or imply that Sun is responsible for any third-party software contained on the Media; (vii) You may not include any third party software on the Media which is intended to be a replacement or substitute for the Software; (viii) You shall indemnify Sun for all damages arising from your failure to comply with the requirements of this Agreement. In addition, you shall defend, at your



expense, any and all claims brought against Sun by third parties, and shall pay all damages awarded by a court of competent jurisdiction, or such settlement amount negotiated by you, arising out of or in connection with your use, reproduction or distribution of the Software and/or the Publication. Your obligation to provide indemnification under this section shall arise provided that Sun: (a) provides you prompt notice of the claim; (b) gives you sole control of the defense and settlement of the claim; (c) provides you, at your expense, with all available information, assistance and authority to defend; and (d) has not compromised or settled such claim without your prior written consent; and (ix) You shall provide Sun with a written notice for each Publication; such notice shall include the following information: (1) title of Publication, (2) author(s), (3) date of Publication, and (4) ISBN or ISSN numbers. Such notice shall be sent to Sun Microsystems, Inc., 4150 Network Circle, M/S USCA12-110, Santa Clara, California 95054, U.S.A , Attention: Contracts Administration.

F. Source Code. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the

terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.

G. Third Party Code. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME.txt file. In addition to any terms and conditions of any third party opensource/freeware license identified in the THIRDPARTYLICENSEREADME.txt file, the disclaimer of warranty and limitation of liability provisions in paragraphs 5 and 6 of the Binary Code License Agreement shall apply to all Software in this distribution.

H. Termination for Infringement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right.

I. Installation and Auto-Update. The Software's installation and auto-update processes transmit a limited amount of data to Sun (or its service provider) about those specific processes to help Sun

understand and optimize them. Sun does not associate the data with personally identifiable information.

You can find more information about the data Sun collects at <http://java.com/data/>.

For inquiries please contact: Sun Microsystems, Inc.,  
4150 Network Circle, Santa Clara, California 95054,  
U.S.A.

## Sun JRE 1.5.0\_18

This Product is distributed with Sun JRE 1.5.0\_18 (JAVA 2 PLATFORM STANDARD EDITION DEVELOPMENT KIT 5.0) ("Sun JDK"). The Sun JDK is distributed in accordance with the Sun Microsystems, Inc. ("Sun") Binary Code License Agreement set forth below. As noted in Section G of the Supplemental License Terms of this license, Sun has provided additional copyright notices and license terms that may be applicable to portions of the Sun JDK in the THIRDPARTYLICENSEREADME.txt file.

Sun Microsystems, Inc. Binary Code License Agreement

for the JAVA 2 PLATFORM STANDARD EDITION DEVELOPMENT KIT 5.0

SUN MICROSYSTEMS, INC. ("SUN") IS WILLING TO LICENSE THE SOFTWARE IDENTIFIED BELOW TO YOU ONLY UPON THE CONDITION THAT YOU ACCEPT ALL OF THE TERMS CONTAINED IN THIS BINARY CODE LICENSE AGREEMENT AND SUPPLEMENTAL LICENSE TERMS (COLLECTIVELY "AGREEMENT"). PLEASE READ THE AGREEMENT CAREFULLY. BY DOWNLOADING OR INSTALLING THIS SOFTWARE, YOU ACCEPT THE TERMS OF THE AGREEMENT. INDICATE ACCEPTANCE BY SELECTING THE "ACCEPT" BUTTON AT THE BOTTOM OF THE AGREEMENT. IF YOU ARE NOT WILLING TO BE BOUND BY ALL THE TERMS, SELECT THE "DECLINE" BUTTON AT THE BOTTOM OF THE AGREEMENT AND THE DOWNLOAD OR INSTALL PROCESS WILL NOT CONTINUE.

1. DEFINITIONS. "Software" means the identified above in binary form, any other machine readable materials

(including, but not limited to, libraries, source files, header files, and data files), any updates or error corrections provided by Sun, and any user manuals, programming guides and other documentation provided to you by Sun under this Agreement. "General Purpose Desktop Computers and Servers" means computers, including desktop and laptop computers, or servers, used for general computing functions under end user control (such as but not specifically limited to email, general purpose Internet browsing, and office suite productivity tools). The use of Software in systems and solutions that provide dedicated functionality (other than as mentioned above) or designed for use in embedded or function-specific software applications, for example but not limited to: Software embedded in or bundled with industrial control systems, wireless mobile telephones, wireless handheld devices, netbooks, kiosks, TV/STB, Blu-ray Disc devices, telematics and network control switching equipment, printers and storage management systems, and other related systems is excluded from this definition and not licensed under this Agreement. "Programs" means Java technology applets and applications intended to run on the Java 2 Platform Standard Edition (J2SE) platform on Java-enabled General Purpose Desktop Computers and Servers.

2. LICENSE TO USE. Subject to the terms and conditions of this Agreement, including, but not limited to the Java Technology Restrictions of the Supplemental License Terms, Sun grants you a non-exclusive, non-transferable, limited license without license fees to reproduce and use internally Software complete and unmodified for the sole purpose of running Programs. Additional licenses for developers and/or publishers are granted in the Supplemental License Terms.

3. RESTRICTIONS. Software is confidential and copyrighted. Title to Software and all associated intellectual property rights is retained by Sun and/or its licensors. Unless enforcement is prohibited by applicable law, you may not modify, decompile, or reverse engineer Software. You acknowledge that Licensed Software is not designed or intended for use in the design, construction, operation or maintenance of any nuclear facility. Sun Microsystems, Inc. disclaims any express or implied warranty of fitness for such uses. No right, title or interest in or to any trademark, service mark, logo or trade name of Sun or its licensors is granted under this Agreement. Additional restrictions for developers and/or publishers licenses are set forth in the Supplemental License Terms.

4. LIMITED WARRANTY. Sun warrants to you that for a period

of ninety (90) days from the date of purchase, as evidenced by a copy of the receipt, the media on which Software is furnished (if any) will be free of defects in materials and workmanship under normal use. Except for the foregoing, Software is provided "AS IS". Your exclusive remedy and Sun's entire liability under this limited warranty will be at Sun's option to replace Software media or refund the fee paid for Software. Any implied warranties on the Software are limited to 90 days. Some states do not allow limitations on duration of an implied warranty, so the above may not apply to you. This limited warranty gives you specific legal rights. You may have others, which vary from state to state.

5. DISCLAIMER OF WARRANTY. UNLESS SPECIFIED IN THIS AGREEMENT, ALL EXPRESS OR IMPLIED CONDITIONS, REPRESENTATIONS AND WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT ARE DISCLAIMED, EXCEPT TO THE EXTENT THAT THESE DISCLAIMERS ARE HELD TO BE LEGALLY INVALID.

6. LIMITATION OF LIABILITY. TO THE EXTENT NOT PROHIBITED BY LAW, IN NO EVENT WILL SUN OR ITS LICENSORS BE LIABLE FOR ANY LOST REVENUE, PROFIT OR DATA, OR FOR SPECIAL, INDIRECT,

CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED REGARDLESS OF THE THEORY OF LIABILITY, ARISING OUT OF OR RELATED TO THE USE OF OR INABILITY TO USE SOFTWARE, EVEN IF SUN HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

In no event will Sun's liability to you, whether in contract, tort (including negligence), or otherwise, exceed the amount paid by you for Software under this Agreement.

The foregoing limitations will apply even if the above stated warranty fails of its essential purpose. Some states do not allow the exclusion of incidental or consequential damages, so some of the terms above may not be applicable to you.

7. TERMINATION. This Agreement is effective until terminated. You may terminate this Agreement at any time by destroying all copies of Software. This Agreement will terminate immediately without notice from Sun if you fail to comply with any provision of this Agreement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right. Upon Termination, you must destroy all copies of Software.

8. EXPORT REGULATIONS. All Software and technical data



delivered under this Agreement are subject to US export control laws and may be subject to export or import regulations in other countries. You agree to comply strictly with all such laws and regulations and acknowledge that you have the responsibility to obtain such licenses to export, re-export, or import as may be required after delivery to you.

9. TRADEMARKS AND LOGOS. You acknowledge and agree as between you and Sun that Sun owns the SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET trademarks and all SUN, SOLARIS, JAVA, JINI, FORTE, and iPLANET-related trademarks, service marks, logos and other brand designations ("Sun Marks"), and you agree to comply with the Sun Trademark and Logo Usage Requirements currently located at <http://www.sun.com/policies/trademarks>. Any use you make of the Sun Marks inures to Sun's benefit.

10. U.S. GOVERNMENT RESTRICTED RIGHTS. If Software is being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), then the Government's rights in Software and accompanying documentation will be only as set forth in this Agreement; this is in accordance with 48 CFR 227.7201 through 227.7202-4 (for Department of Defense (DOD))

acquisitions) and with 48 CFR 2.101 and 12.212 (for non-DOD acquisitions).

11. GOVERNING LAW. Any action related to this Agreement will be governed by California law and controlling U.S. federal law. No choice of law rules of any jurisdiction will apply.

12. SEVERABILITY. If any provision of this Agreement is held to be unenforceable, this Agreement will remain in effect with the provision omitted, unless omission would frustrate the intent of the parties, in which case this Agreement will immediately terminate.

13. INTEGRATION. This Agreement is the entire agreement between you and Sun relating to its subject matter. It supersedes all prior or contemporaneous oral or written communications, proposals, representations and warranties and prevails over any conflicting or additional terms of any quote, order, acknowledgment, or other communication between the parties relating to its subject matter during the term of this Agreement. No modification of this Agreement will be binding, unless in writing and signed by an authorized representative of each party.

## SUPPLEMENTAL LICENSE TERMS

These Supplemental License Terms add to or modify the terms of the Binary Code License Agreement. Capitalized terms not defined in these Supplemental Terms shall have the same meanings ascribed to them in the Binary Code License Agreement. These Supplemental Terms shall supersede any inconsistent or conflicting terms in the Binary Code License Agreement, or in any license contained within the Software.

A. Software Internal Use and Development License Grant. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software "README" file incorporated herein by reference, including, but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce internally and use internally the Software complete and unmodified for the purpose of designing, developing, and testing your Programs.

B. License to Distribute Software. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software README file, including, but not limited to the Java Technology Restrictions of these

Supplemental Terms, Sun grants you a non-exclusive, non-transferable, limited license without fees to reproduce and distribute the Software, provided that (i) you distribute the Software complete and unmodified and only bundled as part of, and for the sole purpose of running, your Programs, (ii) the Programs add significant and primary functionality to the Software, (iii) you do not distribute additional software intended to replace any component(s) of the Software, (iv) you do not remove or alter any proprietary legends or notices contained in the Software, (v) you only distribute the Software subject to a license agreement that protects Sun's interests consistent with the terms contained in this Agreement, and (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

C. License to Distribute Redistributables. Subject to the terms and conditions of this Agreement and restrictions and exceptions set forth in the Software README file, including but not limited to the Java Technology Restrictions of these Supplemental Terms, Sun grants you a non-exclusive,

non-transferable, limited license without fees to reproduce and distribute those files specifically identified as redistributable in the Software "README" file ("Redistributables") provided that: (i) you distribute the Redistributables complete and unmodified, and only bundled as part of Programs, (ii) the Programs add significant and primary functionality to the Redistributables, (iii) you do not distribute additional software intended to supersede any component(s) of the Redistributables (unless otherwise specified in the applicable README file), (iv) you do not remove or alter any proprietary legends or notices contained in or on the Redistributables, (v) you only distribute the Redistributables pursuant to a license agreement that protects Sun's interests consistent with the terms contained in the Agreement, (vi) you agree to defend and indemnify Sun and its licensors from and against any damages, costs, liabilities, settlement amounts and/or expenses (including attorneys' fees) incurred in connection with any claim, lawsuit or action by any third party that arises or results from the use or distribution of any and all Programs and/or Software.

D. Java Technology Restrictions. You may not create, modify, or change the behavior of, or authorize your licensees to create, modify, or change the behavior of,

classes, interfaces, or subpackages that are in any way identified as "java", "javax", "sun" or similar convention as specified by Sun in any naming convention designation.

E. Distribution by Publishers. This section pertains to your distribution of the Software with your printed book or magazine (as those terms are commonly used in the industry) relating to Java technology ("Publication"). Subject to and conditioned upon your compliance with the restrictions and obligations contained in the Agreement, in addition to the license granted in Paragraph 1 above, Sun hereby grants to you a non-exclusive, nontransferable limited right to reproduce complete and unmodified copies of the Software on electronic media (the "Media") for the sole purpose of inclusion and distribution with your Publication(s), subject to the following terms: (i) You may not distribute the Software on a stand-alone basis; it must be distributed with your Publication(s); (ii) You are responsible for downloading the Software from the applicable Sun web site; (iii) You must refer to the Software as Java™ 2 Platform Standard Edition Development Kit 5.0; (iv) The Software must be reproduced in its entirety and without any modification whatsoever (including, without limitation, the Binary Code License and Supplemental License Terms accompanying the Software and proprietary rights notices contained in the

Software); (v) The Media label shall include the following information: Copyright 2006, Sun Microsystems, Inc. All rights reserved. Use is subject to license terms. Sun, Sun Microsystems, the Sun logo, Solaris, Java, the Java Coffee Cup logo, J2SE, and all trademarks and logos based on Java are trademarks or registered trademarks of Sun Microsystems, Inc. in the U.S. and other countries. This information must be placed on the Media label in such a manner as to only apply to the Sun Software; (vi) You must clearly identify the Software as Sun's product on the Media holder or Media label, and you may not state or imply that Sun is responsible for any third-party software contained on the Media; (vii) You may not include any third party software on the Media which is intended to be a replacement or substitute for the Software; (viii) You shall indemnify Sun for all damages arising from your failure to comply with the requirements of this Agreement. In addition, you shall defend, at your expense, any and all claims brought against Sun by third parties, and shall pay all damages awarded by a court of competent jurisdiction, or such settlement amount negotiated by you, arising out of or in connection with your use, reproduction or distribution of the Software and/or the Publication. Your obligation to provide indemnification under this section shall arise provided that Sun: (a) provides you prompt notice of the claim; (b) gives you sole

control of the defense and settlement of the claim; (c) provides you, at your expense, with all available information, assistance and authority to defend; and (d) has not compromised or settled such claim without your prior written consent; and (ix) You shall provide Sun with a written notice for each Publication; such notice shall include the following information: (1) title of Publication, (2) author(s), (3) date of Publication, and (4) ISBN or ISSN numbers. Such notice shall be sent to Sun Microsystems, Inc., 4150 Network Circle, M/S USCA12-110, Santa Clara, California 95054, U.S.A , Attention: Contracts Administration.

F. Source Code. Software may contain source code that, unless expressly licensed for other purposes, is provided solely for reference purposes pursuant to the terms of this Agreement. Source code may not be redistributed unless expressly provided for in this Agreement.

G. Third Party Code. Additional copyright notices and license terms applicable to portions of the Software are set forth in the THIRDPARTYLICENSEREADME.txt file. In addition to any terms and conditions of any third party opensource/freeware license identified in the THIRDPARTYLICENSEREADME.txt file, the disclaimer of warranty



and limitation of liability provisions in paragraphs 5 and 6 of the Binary Code License Agreement shall apply to all Software in this distribution.

H. Termination for Infringement. Either party may terminate this Agreement immediately should any Software become, or in either party's opinion be likely to become, the subject of a claim of infringement of any intellectual property right.

I. Installation and Auto-Update. The Software's installation and auto-update processes transmit a limited amount of data to Sun (or its service provider) about those specific processes to help Sun understand and optimize them. Sun does not associate the data with personally identifiable information. You can find more information about the data Sun collects at <http://java.com/data/>.

For inquiries please contact: Sun Microsystems, Inc., 4150 Network Circle, Santa Clara, California 95054, U.S.A.  
(LFI#143333/Form ID#011801)

## XNTP v.3-5.93

This product includes XNTP v.3-5.93. XNTP v.3-5.93 is distributed in accordance with the following notice and permission:

\*\*\*\*\*  
\*\*\*\*\*

```
*                                     *
```

\* Copyright (c) David L. Mills 1992, 1993, 1994, 1995, 1996 \*

```
*                                     *
```

\* 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 appears in all \*

\* copies and that both the copyright notice and this permission \*

\* notice appear in supporting documentation, and that the name \*

\* University of Delaware not be used in advertising or publicity \*

\* pertaining to distribution of the software without specific, \*

\* written prior permission. The University of Delaware makes no \*

\* representations about the suitability this software for any \*

\* purpose. It is provided "as is" without express or implied \*

\* warranty. \*

\*\*\*\*\*  
\*\*\*\*\*/

## XScreenSaver

Copyright © 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005 by Jamie Zawinski. 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. No representations are made about the suitability of this software for any purpose. It is provided "as is" without express or implied warranty.

## 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.