CA Service Desk Manager

Release Notes

r12.6

Second Edition

CA Technologies Product References

This documentation set references the following CA Technologies products:

- CA Business Intelligence

- CA IT PAM (also known as CA IT Process Automation)

- CA Management Database (CA MDB)

- CA Service Desk Manager (CA SDM)

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information you need for your Home Office, Small Business, and Enterprise CA Technologies 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 Technologies product documentation, you can send a message to techpubs@ca.com.

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

Contents

Chapter 5: System Information   51

Chapter 6: Installation and Migration Considerations   59

Chapter 7: Known Issues   63

Appendix A: Third-Party Acknowledgements   133

Appendix B: Accessibility Features   165

Chapter 1: Welcome

Welcome to CA Service Desk Manager r12.6.

This section contains the following topics:

What this Document Covers

This document provides detailed information about enhancements and changes in functionality for this release of CA SDM. The Release Notes includes system requirements, general information about the documentation set, and known issues that affect CA SDM. In addition, this document provides the following information:

- How analysts use the updated analyst user interface (see page 15)

- How administrators use Web Screen Painter (WSP) (see page 28) to modify list and detail forms for the analyst user interface

- How administrators migrate and upgrade (see page 59) their CA SDM environment

- Installation and migration considerations (see page 59).

Important! The migration information in this document supersedes the migration information in the *CA SDM Implementation Guide*. Use the information in this document for migrating to CA SDM r12.6.

Note: At publication time, CA SDM r12.6 supports the operating systems and the third-party software listed in this document. For assistance, contact CA Support at http://ca.com/support. For complete upgrade information, see the CA SDM Upgrade Information Page on http://ca.com/support.

International Support

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

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

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

Object Contact	Internationalized	Translated
Brazilian	Yes	Yes
Chinese (Simplified)	Yes	Yes
Chinese (Traditional)	Yes	No
French	Yes	Yes
German	Yes	Yes
Italian	Yes	Yes
Japanese	Yes	Yes
Korean	Yes	No
Spanish	Yes	Yes

Localized Versions

The following list indicates which localized versions of the product are supported on Windows:

- German
- French
- Brazilian Portuguese
- Italian
- Spanish
- Japanese
- Simplified Chinese

The following list indicates which localized versions of the product are supported on Linux and Solaris:

- French
- German
- Japanese

Find Product Roadmap Information

The CA Service Desk Manager Product Roadmap outlines CA Technologies general product direction and provides information that can help you plan and manage your CA SDM implementation. For example, the CA Service Desk Manager Product Roadmap provides you with the following information:

- Planned features and functionality

- End-of-service announcements

- Interim releases

- CA SDM components

- Removed features and functionality

- Product direction

- Planned changes such as feature and functionality removal

To find the CA Service Desk Manager Product Roadmap

1. Open a browser and go to http://ca.com/support.

   The CA Support Online page appears.

2. Select CA Service Desk Manager from the Product finder drop-down list.

   The CA Service Desk Manager page appears.

3. Scroll to the Product Status section and click the CA Service Desk Manager Product Roadmap link.

   The CA Support login page appears if you are not already logged in.

4. Log in to CA Support Online.

   The CA Service Desk Manager Product Roadmap appears.

Fixes

For all published fixes for CA SDM, see the Published Solutions provided by Technical Support at http://ca.com/support.

Chapter 2: New and Changed Features

This section contains the following topics:

CA Business Intelligence

The CA SDM r12.6 installation media includes CA Business Intelligence Release 3.2. Upgrading to CA Business Intelligence Release 3.2 does not affect existing CA SDM reports.

Note: For more information about installing or upgrading CA Business Intelligence, see the various Supported Platforms documents on the CA Business Intelligence DVD. These documents include specific version and patch-level requirements for web application servers, web browsers, and operating systems.

More information:

CA Business Intelligence Support (see page 85)

Analyst Interface

The CA SDM analyst interface contains the following new or changed features:

- Data Grid List

- Mouse-over Previews

- Nested Tabs

- Search-As-You-Type

- New web.cfg Properties

Note: Web forms (HTMPL files) define the pages that appear in the CA SDM web interface. The Data Grid, Mouse-over Previews, Nested tabs, and new web.cfg properties features improve how administrators modify web forms in Web Screen Painter (WSP). For example, these enhancements let administrators improve usability for forms used by analysts.

Data Grid List

Data grid lists let you view the contents of a product page on a list form without opening a new page. This data-bound control lists items from the data source in a table so you can select items, sort items, and fetch data.

Example: Expand and Collapse Incident Details on the Incident List Form
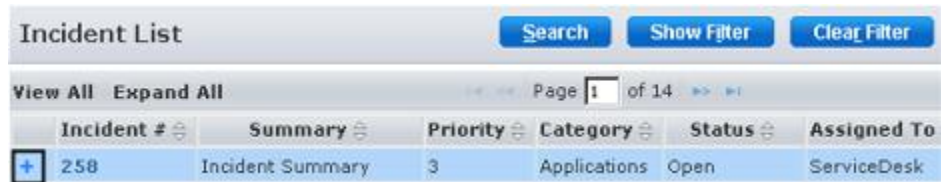
1. Select Incidents from the Scoreboard.

   The Incident folder expands to reveal nested folders for Assigned and Unassigned incidents.

2. Select the Assigned or Unassigned folder.

   The folder expands to reveal a nested folder for All, and folders for Incidents grouped by priority level.

3. Select the folder for the Incidents you want to see.
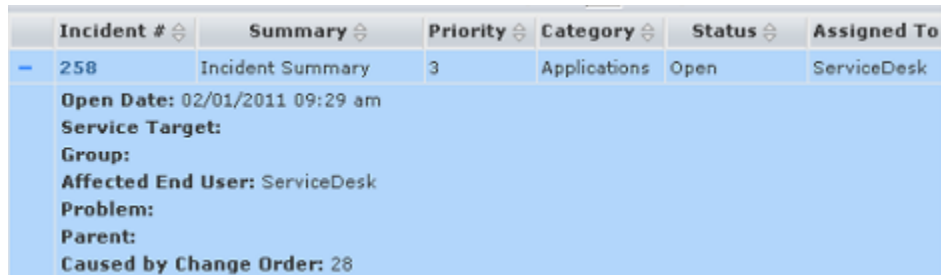
   The primary Incident details appear in a single row, as shown in the following example:

4. Click the plus sign that appears next to the Incident number, as shown in the previous example.

   The data grid list expands to display the Incident details, as shown in the following example:

5. Click the minus sign to collapse the Incident details.

More information:

Modify Data Grid Lists on List Forms (see page 30)

Mouse-Over Preview

Mouse-over previews let you view key details within the current form without the need to click a link or open a new web page. The *mouse-over preview* appears when you place a cursor over an object link on a list or detail form for a certain amount of time. If you move the mouse away from the link before the delay time expires, the preview does not appear. Mouse-over previews appear by default on all list and detail forms in read-only mode.

The following predefined mouse-over preview forms are available with the product:

- preview_chg.htmpl (Change Order)
- preview_cnt.htmpl (Contact)
- preview_cr.htmpl (Request)
- preview_in.htmpl (Incident)
- preview_iss.htmpl (Issue)
- preview_KD.htmpl (Knowledge Document)
- preview_nr.htmpl (Configuration Item)
- preview_pr.htmpl (Problem)

More information:

Examples: Display a Mouse-Over Preview

Mouse-over previews let you view details about list and detail forms, such as Incidents.

Example: Display a Mouse-over Preview on the Incident List Form

1. Select Incidents from the Scoreboard.

   The Incident folder expands to reveal nested folders for Assigned and Unassigned Incidents.

2. Select the Assigned or Unassigned folder.

   The folder expands to reveal a nested folder for All, and folders for Incidents grouped by priority level.

3. Select the folder for the Incidents you want to see.

   The Incident list form appears.

4. Move your cursor over the first linked object, for example, the Incident ID number.

   The mouse-over preview appears and displays key information about the object.

Example: Display a Mouse-over Preview on the Incident Detail Form in Read-Only Mode

1. Open an Incident.

   The Incident detail form opens in read-only mode.

2. Move your cursor over a linked object, for example, the Affected End User link.

   The mouse-over preview appears and displays key information about the object.

3. (Optional) Use the drag-and-drop method to resize or move the preview window to a different location on the form.

4. Press ESC on the keyboard or click Close link to close the mouse-over preview.

Configure the Mouse-Over Preview Delay Time

Configure the delay time between moving the mouse cursor over an object link and when the mouse-over preview appears. For example, analysts view a list of Incidents and as they move their cursor over these Incidents, the previews appear quicker than expected. Analysts prefer a longer delay time and request that you increase it.

To configure the mouse-over preview delay time

1. Click the Administration tab.

   The Administration console appears.

2. Click Options Manager, Web Options.

   The Option List appears.

3. Click mouseover_preview_delay_time.

   The Options Detail page appears.

   Note: This option is systemwide and impacts every user in your environment.

4. Click Edit.

5. Enter a value from 100 to 5000 in the Option Value field.

   Default: 1000 milliseconds

6. Click Save.

7. Click Refresh to confirm your selections.

   The Options Detail is updated.

8. Restart CA SDM services.

   The delay time is changed.

Modify the Mouse-Over Preview Delay Time

Modify the Options Manager systemwide mouseover_preview_delay_time option value for an individual web engine by specifying a different value in its web.cfg file. For example, analysts in your environment prefer a higher delay time and request that you change it globally.

Note: The CA SDM installation delivers one default web engine configuration file, web.cfg. This file defines global configuration information regarding the web application.

To override the mouse-over preview delay time

1. Open the web.cfg file for editing.

   ■ (Windows) %NX_ROOT%\bopcfg\www\

   ■ (UNIX) $NX_ROOT/bopcfg/www/

2. Locate the MouseoverPreviewDelayTime parameter and specify a number for the value.

   This parameter specifies the delay time, in milliseconds, between moving the cursor over a link and the display of the mouse-over preview. The preview does not display if you move the mouse away from the link before the delay time expires.

   Default: 1000 milliseconds

3. Save the web.cfg file.

   The parameter is set.

4. Recycle the web engine.

   The delay time is changed.

More information:

Modify a Mouse-Over Preview

Web Screen Painter (WSP) lets you view a set of mouse-over preview forms to modify the content and appearance of the information. After you modify the form, you publish it and refresh the web cache so that the form is available to end users.

Example: Modify the preview_chg.htmpl Detail Form and Publish Changes

1. Log in to WSP.

   The main window appears.

2. Click File, Open.

   The Open Form window appears.

3. Select the *preview_chg.html* form from the list.

   The Form Edit window appears.

4. In the Edit window, use the Design view tab to modify CA SDM controls on the detail form. You can rearrange controls by dragging and dropping them from the Control Palette to the desired location on the form. You can also use the Insert Control dialog to place a control on the form.

5. When you are satisfied with your changes, select the Edit window, and then select File, Save.

   The updated *preview_chg.html* form is saved in the site/mods/wsp directory (UNIX) or the site\mods\wsp directory (Windows) on the CA SDM server.

6. To make the changes available to end users, select File, Publish.

   The Publish window appears. You can change the selection of changes to be published by clicking them.

7. Execute the *pdm_webcache –H* command after publishing the changes.

   The web cache is refreshed.

8. To verify your changes, open a Change Order ticket (in read-only mode).

   The Change Order Detail form appears.

9. Move your cursor over an object link on the detail form.

   The published changes appear in the mouse-over preview window.

Create a Mouse-Over Preview

Custom mouse-over preview forms let you specify the controls that you want available for end users to preview. You use WSP to add controls to a form or to remove controls. You can create mouse-over previews for forms that do not have *preview_* forms by default. You can also create mouse-over previews for custom forms you created in your CA SDM environment.

For example, analysts in your environment requested a custom mouseover preview form. After you create the form, you publish it so that the form is available for viewing.

To create a mouse-over preview

1. Complete one of the following tasks:

   If you want to create a mouse-over preview for a form that does not have a *preview_* form by default:

   a. Click File, Open.

      The Open Form dialog appears.

   b. Select a form such as detail_loc.htmpl and click Open.

      The detail_loc.htmpl form appears.

   If you want to create a mouse-over preview for a custom form.

   a. Click File, New.

      The New Form dialog appears.

   b. Select the following options:

      – **Interface**—Analyst

      – **Form Group**—Default

      – **File Name**—detail.template

      – **Select table for new list or detail form**—Select a factory or table to associate with detail.template from the drop-down list.

   c. Click New.

      The detail form appears.

2. Add or remove custom controls to the form.

3. Click File, Save As, specify a file name using the *preview_* prefix, and click Save.

   For example, enter **preview_loc.htmpl**.

   The preview_loc.htmpl detail form is saved in the site/mods/wsp directory (UNIX) or the site\mods\wsp directory (Windows) on the CA SDM server.

4. Click File, Publish.

   The Publish window appears.

5. Click OK.

   The preview form is published. The forms are available for viewing.

6. Execute the *pdm_webcache –H* command after publishing the changes.

   The web cache is refreshed.

7. On the Administration tab, navigate to Service Desk, Application Data, Codes, Locations.

   The Location List page (list_loc.htmpl) appears.

8. Move your cursor over an object link on the list form.

   The mouse-over preview appears.

More information:

Modify a Mouse-Over Preview (see page 20)

Disable Mouse-Over Previews

If an individual user does not want to see preview forms pop up automatically, they can disable mouseover previews in their user preferences.

To disable mouse-over previews

1. Select View, Preferences.

   The Preferences page appears.

2. Select the Disable Mouseover Previews check box in General Settings.

3. Click Save.

   Mouseover previews are disabled.

Note: Mouse-over previews are disabled automatically when either Using Screen Reader or Mouseover Menus is enabled in Preferences.

Nested Tabs

The Nested tabs (notebook) control lets you expand or collapse key details within the current form. For example, use the control to customize how you organize tabs on the Incident Detail Form.

Example: Expand or Collapse Nested Tabs Control Details on the Incident Detail Form

1. Select Incidents from the Scoreboard.

   The Incident folder expands to reveal nested folders for Assigned and Unassigned Incidents.

2. Select the Assigned or Unassigned folder.

   The folder expands to reveal a nested folder for All, and folders for incidents grouped by priority level.

3. Select the folder for the Incidents you want to see.

   The Incident List page appears.

4. Open an Incident.

   The Incident Detail form appears.

5. Locate the tabs at the bottom of the detail form. Each tab is numbered from left to right. The following example shows the Additional Information, Logs, Knowledge Management, and Relationships tabs:

6. Click the second tab, for example, 2. Logs.

   The first tab collapses and expands the second tab. The second tab shows the content of that tab and the tabs nested within that tab. The following example shows the Activities, Event Log, and Support Automation tabs:
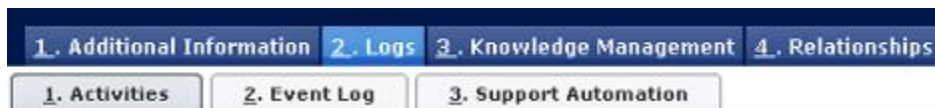
7. Click the third tab, for example, 3. Knowledge Management.

   The second tab collapses and expands the third tab. The third tab shows the content of that tab and the tabs nested within that tab. The following example shows the Knowledge and Solutions tabs:
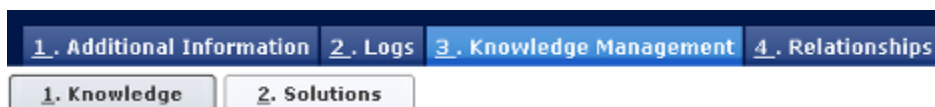
More information:

Modify Notebooks on Detail Forms (see page 32)
New web.cfg Properties (see page 27)

Disable Nested Tabs Control

CA SDM enables the Nested tabs control by default. If you want to revert to the notebook styles used in the previous release for users in your environment, disable the nested tabs control in the administration interface. For example, analysts in your environment prefer to click a tab that shows only the content of that tab.

To disable the tabs-within-tabs control

1. Click the Administration tab.

    The Administration console appears.

2. Click Options Manager, Web.

    The Option List appears.

3. Click use_nested_tabs.

    The Options Detail page appears.

4. Click Edit.

5. Select No from the Option Value drop-down list and click Save.

6. Click Refresh to confirm your selections.

    The Options Detail is updated.

7. Restart CA SDM services.

    The control is disabled.

More information:

New web.cfg Properties

Search-As-You-Type

Perform dynamic, real-time matching using Search-As-You-Type to locate items quickly. As you type your term, the search field dynamically displays one or more matching results before you stop typing. For example, you begin to type your name into the field and a match of your full name displays after entering three letters.

You can use Search-As-You-Type on any lookup or drop-down list.

Example: Use Search-As-You-Type on the Incident List Form

1. Open an Incident on the Incident list form.

    The Incident detail form appears.

2. Begin typing in the Requester field of the ticket.

   As you type your term, the field displays matching results. A list of suggested results is generated and they appear under the text field.

3. Perform one of the following steps:

   ■ If your term appears in the list of suggested results, select the term to see relevant results.

   ■ Use the keyboard down arrow key to scroll through the list of suggested results.

More information:

Configure the Minimum Number of Characters

Configure the minimum number of characters that a user enters in a lookup field before the field starts displaying matching results. For example, increase the number of characters if your environment contains many users that share the first three characters in their user names.

To configure the minimum number of characters

1. Click the Administration tab.

   The Administration console appears.

2. Click Options Manager, Web Options.

   The Option List appears.

3. Click min_chars_auto_suggest.

   The Options Detail page appears.

4. Click Edit.

5. Enter a value in the Option Value field and click Save.

   Default: 3 characters

6. Click Refresh to confirm your selections.

   The Options Detail is updated.

7. Restart CA SDM services.

   The minimum number of characters is configured.

More information:

Configure the Number of Suggestions to Display

Configure the number of suggestions to display in matching results. For example, increase the number of suggestions if analysts in your environment request 50 suggestions.

To configure the number of suggestions to display

1. Click the Administration tab.

    The Administration console appears.

2. Click Options Manager, Web Options.

    The Option List appears.

3. Click max_records_auto_suggest.

    The Options Detail page appears.

4. Click Edit.

5. Enter a value from 25 to 250 in the Option Value field and click Save.

    Default: 25 suggestions

6. Click Refresh to confirm your selections.

    The Options Detail is updated.

7. Restart CA SDM services.

    The number of suggestions is configured.

More information:

New web.cfg Properties (see page 27)

New web.cfg Properties

The CA SDM installation delivers one default web engine configuration file, web.cfg. This file defines configuration information regarding the web application. These properties are available in NX.env and you can modify these values in Options Manager.

The *web.cfg* file contains the following new options:

MinCharsAutoSuggest

Specifies the minimum number of characters to enter in the lookup fields before search as you type or autosuggest displays suggestions.

Default: 3

MaxRecordsAutoSuggest

Specifies the number of records that autosuggest displays when search as you type or autosuggest displays suggestions below a lookup.

Default: 25

MouseoverPreviewDelayTime

Specifies the delay time (in milliseconds) between hovering the mouse pointer over a link and the display of the mouseover preview.

If the mouse moves away from the link before the delay time expires, the preview does not appear.

Default: 1000

UseNestedTabs

Specifies whether to display the nested tab control on detail forms.

Default: Enabled

Note: For detailed information about configuring options in the *web.cfg* file, see the *Implementation Guide*.

More information:

Web Screen Painter

Web Screen Painter (WSP) lets you customize the CA SDM schema and web interface. WSP contains the following changed features:

- Because of many new controls in CA SDM r12.6, the controls and context menus no longer list available controls. Instead, the Insert Controls (see page 28) dialog lists all available controls appropriate for the current form, with a brief description of each one.

- New Row Icons (see page 30) represent rows that you drag-and-drop like any other control.

- You edit list form Data Grid Lists (see page 30) with drag-and-drop.

- Detail form notebooks include Nested Tabs (see page 32) that you edit with drag-and-drop.

- CA SDM r12.6 removes the List Designer and Notebook Designer from WSP.

    You edit Data Grid Lists and Nested Tabs (notebooks) with drag-and-drop or by directly inserting controls as the other sections of list and detail forms. These enhancements improve usability and let you modify forms quickly.

Note: For more information about customizing schema and the web interface using WSP, see the *Implementation Guide*.

More information:

Insert Controls Dialog

The Insert Controls dialog lists all available controls appropriate to the current form, and includes a brief description for each control. The dialog does not close while you insert multiple controls and modify their properties. This behavior lets you design the form efficiently.

Note: The selection of controls listed in the Insert Controls dialog depends on the active form and the currently selected control. Only controls that apply to the form appear in the Insert Control dialog. WSP restricts list controls to list forms and detail controls to detail forms. WSP shows notebook or grid controls only when the currently selected control is within a notebook or grid.

Insert Control Dialog Options

Open the Insert Control dialog from the File menu. The dialog lists all of the appropriate UI controls for the section of the form you select to edit.

The dialog contains the following options:

Insert Before

Inserts the selected control from the list before the currently selected control on the base form, and makes it the currently selected control.

Insert After

Inserts the selected control from the list after the currently selected control on the base form, and makes it the currently selected control.

Prev

Moves the currently selected control to the control that precedes it on the form.

Next

Moves the currently selected control to the control that follows it on the form.

Properties

Opens the Properties dialog for the currently selected control.

Close

Closes the Insert Control form.

Close Form After Insert

(Enabled) Inserts the selected control and closes the Insert Control dialog when you click Insert Before or Insert After.

(Disabled) Inserts the selected control when you click Insert Before or Insert After. The Insert Control dialog remains open to insert additional controls or request properties for the currently selected control. After you clear the check box, the Close Form After Insert check box remains unchecked until you either select it again or end your WSP session.

Default: Enabled

Properties Dialog

The Properties Dialog lets you review and edit all properties associated with a control. By default, the dialog shows only the most commonly used properties. You can select the Advanced check box in the lower right portion of the form to display all properties of a control. This list includes internal properties or those properties used infrequently. After you select Advanced, the check box stays selected until either you clear it or end your WSP session.

Delete Notebook

The Delete Notebook option is added to the Controls menu for detail forms. This option only appears when the detail form contains a notebook. If the form does not contain a notebook, an Insert Notebook option appears in the menu and as a button on the toolbar.

New Row Icons

WSP adds the following row icons that you can drag-and-drop like any other control:

Normal New Row

Specifies the start of a new row on a detail form or list form search filter.

Expandable Row Header

Specifies the start of an expansion section of a detail form. An expansion section contains one or more rows of a detail form. You hide or show the row by clicking the expansion section header.

Filter Open or Close Row

Specifies the start of a filter section of a search filter on a list form. A filter section contains one or more rows of a search filter. You show or hide the rows by clicking the More or Less link.

Modify Data Grid Lists on List Forms

Use WSP to modify data grids (see page 16). For example, you can modify list_chg.htmpl to change what the end user sees on the form.

Note: You cannot move an existing control after the grid area.

To modify the data grid

1. Open WSP from the Start Menu or from the pdm_wsp command.

    The WSP Login appears.

2. Enter your login credentials and click Log In.

    The Web Screen Painter appears.

3. Click File, Open, and select list_chg.htmpl, click OK.

    The HTMPL file opens for editing.

4. Locate the blue area after the labeled fields near the end of the form in the Design view.

   If you prefer Source view, the data grid appears between the following lines of code:

   ```
   <PDM_MACRO name=lsStart>
   <PDM_MACRO name=lsEnd>
   ```

   The following example shows this data grid area in Design view:
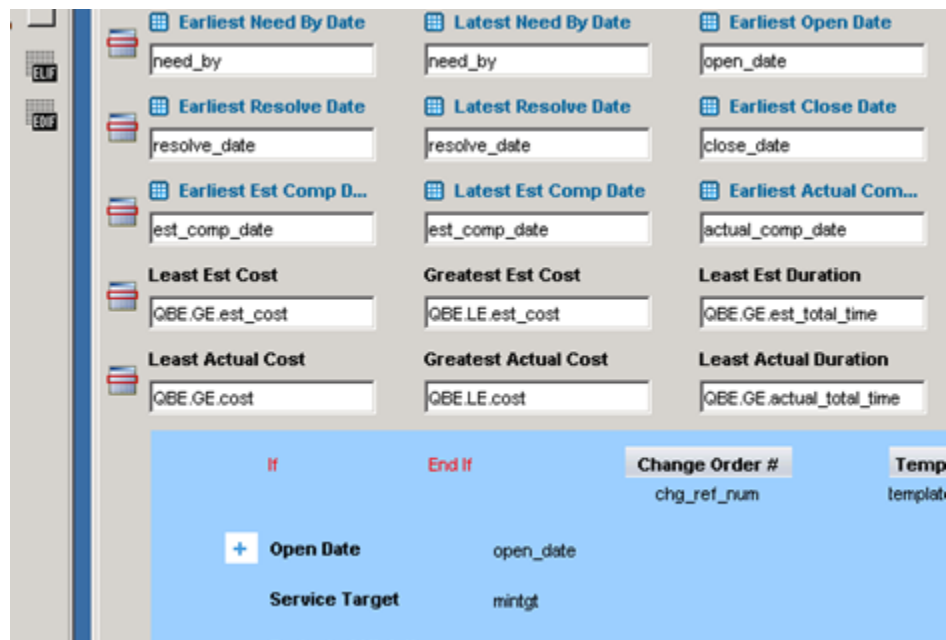
   The plus sign in the data grid area represents the beginning of the expansion section of the row (the fields that are displayed only when a user clicks plus on the row in the list form grid). The following code generates the plus sign in the Source view:

   ```
   <PDM_MACRO name=lsCol attr=open_date label="Open Date" sort="DESC" startrow=yes>
   ```

   The *startrow=yes* parameter specifies to start a row, and it starts the expansion section of the row.

5. Drag-and-drop columns to move them in a list.

   You can move columns between the main part of the row and the expansion section.

6. To insert a list column, right-click a control or anywhere within the blue background, and select either Insert Column or Insert Control (see page 28).

   If you select Insert Column, WSP inserts a column to the left of the currently selected control. If you select Insert Control, WSP displays the Insert Control dialog that lets you add the desired control to the form.

7. Click Preview.

   Your unpublished changes appear in the web browser.

8. Save the form.

   The data grid is modified.

Modify Notebooks on Detail Forms

Use WSP to modify notebooks (see page 22) and how HTMPL forms appear. For example, you can modify detail_chg.htmpl to change what the end user sees on the form, such as by adding a row and notebook control.

To modify a notebook

1. Click File, Open, and select detail_in.htmpl, click OK.

   The HTMPL file opens.

2. Locate the blue area of the form in the Design view that contains the first numbered label.

   If you prefer Source view, the notebook area appears between the following line of code:

   ```
   <PDM_MACRO name=startNotebook hdr=cng_nb>
   <PDM_MACRO name=endNotebook>
   ```

   The following example shows this notebook area in Design view that begins with the numbered label titled 1. Additional Information:
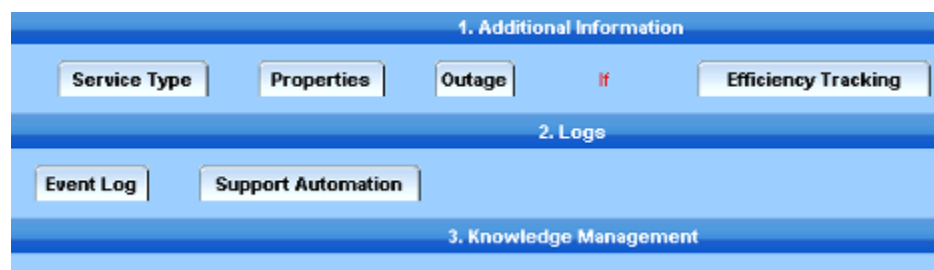
   Note: In CA SDM r12.6, a notebook can contain nested tabs. In WSP, a high-level tab (a tab containing other tabs) is named a tab group. WSP displays a tab group as a dark blue solid bar that spans the entire blue notebook area, with a numbered label in its center. A low-level tab (a tab that does not contain other tabs) is named a tab. WSP displays low-level tabs as rectangles with rounded corners.

3. Click a tab to select it. Selecting a tab highlights and displays a link to the contents of the tab at the bottom of the notebook.

   You can move tabs and tab groups within a notebook using drag-and-drop. Moving a tab group moves all the tabs within the group with it.

4. To insert a tab or tab group, right-click a control or anywhere on the blue notebook background and select Insert Tab, Insert Tab Group, or Insert Control (see page 28).

    If you select Insert Tab or Insert Tab Group, WSP inserts a new tab or tab group to the left of the currently selected control. If you select Insert Control, WSP displays the Insert Control dialog that lets you add the desired control to the form.

5. Click Preview.

    Your unpublished changes appear in the web browser.

6. Save the form.

    The notebook is modified.

PDM_MACRO Statements for UI Controls

CA SDM stores PDM_MACRO statement definitions that define UI controls in the database, instead of storing definitions as text files.

Important! Modifying these UI control definitions is *not* supported. We recommend that you do *not* attempt to migrate PDM_MACRO customizations, due to the number of UI changes in CA SDM r12.6.

More information:

Installation and Migration Considerations (see page 59)
Customized Web Macro Migration (see page 62)

pdmMacro Object

This object describes a web macro (PDM_MACRO). The object details are as follows:

Associated Table: usp_pdmMacro

Factories: default

REL_ATTR: id

Common Name: name

UI_INFO: NOLOOKUP

Function Group: admin

Attribute	DB Field	Data Type	SREL References	Flags
name	name	STRING		REQUIRED
text	text	STRING		REQUIRED
type	type	SREL	pdmMacroType	REQUIRED

Attribute	DB Field	Data Type	SREL References	Flags
control_type	control_type	SREL	pdmMacroControlType	
icon	icon	STRING		
description	description	STRING		
label_icon	label_icon	STRING		
delete_flag	del	SREL	actbool	REQUIRED
last_mod_dt	last_mod_dt	DATE		
last_mod_by	last_mod_by	SREL	cnt	

pdmMacroParam Object

This object describes an argument of a web macro. The object details are as follows:

Associated Table: usp_pdmMacroParam

Factories: default

REL_ATTR: id

Common Name: name

UI_INFO: NOLOOKUP

Function Group: admin

Attribute	DB Field	Data Type	SREL References	Flags
macro	macro	SREL	pdmMacro	
name	name	STRING		REQUIRED
caption	caption	STRING		REQUIRED
description	description	STRING		
tooltip	tooltip	STRING		
help_form	help_form	STRING		
is_required	is_required	INTEGER		
is_advanced	is_advanced	INTEGER		
default_value	default_value	STRING		
type	type	SREL	pdmMacroParamType	REQUIRED
size_textbox	size_textbox	INTEGER		
value_list	value_list	STRING		
delete_flag	del	SREL	actbool	REQUIRED

Attribute	DB Field	Data Type	SREL References	Flags
last_mod_dt	last_mod_dt	DATE		
last_mod_by	last_mod_by	SREL	cnt	

pdmMacroType Object

This object contains macro form types (detail or list). The object details are as follows:

Associated Table: usp_pdmMacroType

Factories: default

REL_ATTR: enum

Common Name: name

UI_INFO: NOLOOKUP

Function Group: admin

Attribute	DB Field	Data Type	SREL References	Flags
enum	enum	INTEGER		
sym	sym	STRING		
description	description	STRING		
delete_flag	del	INTEGER		
last_mod_dt	last_mod_dt	DATE		
last_mod_by	last_mod_by	SREL	cnt	

pdmMacroControlType Object

This object contains design view control types. The object details are as follows:

Associated Table: usp_pdmMacroControlType

Factories: default

REL_ATTR: enum

Common Name: name

UI_INFO: NOLOOKUP

Function Group: admin

Attribute	DB Field	Data Type	SREL References	Flags
enum	enum	INTEGER		
sym	sym	STRING		
description	description	STRING		
delete_flag	del	INTEGER		
last_mod_dt	last_mod_dt	DATE		
last_mod_by	last_mod_by	SREL	cnt	

pdmMacroParamType Object

This object contains design view control types. The object details are as follows:

Associated Table: usp_pdmMacroParamType

Factories: default

REL_ATTR: enum

Common Name: name

UI_INFO: NOLOOKUP

Function Group: admin

Attribute	DB Field	Data Type	SREL References	Flags
enum	enum	INTEGER		
sym	sym	STRING		
description	description	STRING		
delete_flag	del	INTEGER		
last_mod_dt	last_mod_dt	DATE		

Attribute	DB Field	Data Type	SREL References	Flags
last_mod_by	last_mod_by	SREL	cnt	

usp_pdmMacro Table

This table stores the UI macros that were stored as text files in previous releases of CA SDM.

Field	Data Type	Reference	Remarks
id	INTEGER		UNIQUE NOT_NULL KEY
name	STRING 64		Specifies the macro name.
text	STRING 64000		Specifies the macro text.
type	INTEGER	usp_pdmMacroType	Specifies one of the following macro types: ■ 0—non-UI ■ 1—detail ■ 2—list ■ 3—search ■ 4—menu ■ 5—frameset ■ 6—other UI
icon	STRING 256		Specifies the macro icon in the gallery.
label_icon	STRING 256		Specifies the name of the graphic to use in the label.

Field	Data Type	Reference	Remarks
control_type	INTEGER	usp_pdmMacroControlType	Specifies one of the following controls in Design view: ■ 0—none ■ 1—text box ■ 2—check box ■ 3—drop-down ■ 4—button ■ 5—read-only ■ 6—new row ■ 7—notebook ■ 8—notebook tab ■ 9—notebook tab group ■ 10—HTML edit box ■ 11—LREL multi-select box ■ 12—radio button ■ 13—frame ■ 14—menubar item ■ 15—menu item ■ 16—priority matrix
description	STRING 1024		Specifies the description and purpose of the macro.
del	INTEGER		
last_mod_dt	LOCAL_TIME		Specifies the date the macro was last modified.
last_mod_by	UUID	ca_contact	Specifies the name of the user who last updated the macro.

usp_pdmMacroParam Table

This table stores information about parameters of the macros defined in pdmMacro.

Field	Data Type	Reference	Remarks
id	INTEGER		UNIQUE NOT_NULL KEY
macro	INTEGER	usp_pdmMacro	Specifies the macro containing argument.
name	STRING 64		Specifies the argument name.
caption	STRING 64		Specifies the caption on the properties form.
description	STRING 1024		Specifies the description of the argument.
tooltip	STRING 512		Specifies the tooltip for the properties form.
help_form	STRING 256		Specifies the HTML form with help data.
is_required	INTEGER		Indicates if the argument is required (0 or 1).
is_advanced	INTEGER		Shows in the Advanced view only (0 or 1).
default_value	STRING 64		Specifies the default value.
type	INTEGER	usp_pdmMacroParamType	Specifies one of the following controls in Design view: 1—text box 2—check box 3—drop-down 4—factory lookup 5—attribute lookup 6—SREL attribute lookup 7—date attribute lookup 8—suppress from form
size_textbox	INTEGER		Specifies the size of the textbox.
value_list	STRING 1024		Specifies the common-separated list of values.

Field	Data Type	Reference	Remarks
del	INTEGER		NOT_NULL
last_mod_dt	LOCAL_TIME		Specifies the date the macro was last modified.
last_mod_by	UUID	ca_contact	Specifies the name of the user who last updated the macro.

usp_pdmMacroType Table

This table stores macro form types, such as detail, list, menu, and so on.

Field	Data Type	Reference	Remarks
id	INTEGER		UNIQUE NOT_NULL KEY
sym	STRING 64		
enum	INTEGER		Specifies the form type using the macro: ■ 1—detail ■ 2—list ■ 3—search ■ 4—menu ■ 5—other UI ■ 6—non-UI
description	STRING 1024		Specifies the description of the macro type.
del	INTEGER		NOT_NULL
last_mod_dt	LOCAL_TIME		Specifies the date the macro was last modified.
last_mod_by	UUID	ca_contact	Specifies the name of the user who last updated the macro.

usp_pdmMacroControlType Table

This table stores macro control types, such as lookup, drop-down, and so on.

Field	Data Type	Reference	Remarks
id	INTEGER		UNIQUE NOT_NULL KEY
sym	STRING 64		
enum	INTEGER		Specifies the control type: ■ 0—textbox ■ 1—drop-down ■ 2—new row
description	STRING 1024		Specifies the description of the macro type.
del	INTEGER		NOT_NULL
last_mod_dt	LOCAL_TIME		Specifies the date the macro was last modified.
last_mod_by	UUID	ca_contact	Specifies the name of the user who last updated the macro.

usp_pdmMacroParamType Table

This table stores parameter value types on the WSP properties form, such as textbox, drop-down, and so on.

Field	Data Type	Reference	Remarks
id	INTEGER		UNIQUE NOT_NULL KEY
sym	STRING 64		
enum	INTEGER		Specifies the format on the properties form: ■ 1—text box ■ 2—check box ■ 3—drop-down
description	STRING 1024		Specifies the description of the macro type.
del	INTEGER		NOT_NULL

Field	Data Type	Reference	Remarks
last_mod_dt	LOCAL_TIME		Specifies the date the macro was last modified.
last_mod_by	UUID	ca_contact	Specifies the name of the user who last updated the macro.

New Web Macros

Most HTMPL forms in CA SDM r12.6 contain Web Macros. Administrators add and modify these macros to customize forms in WSP.

Note: For more information about Web Macros and their properties, see the *WSP Online Help*.

The following list describes the new Web Macro definitions in CA SDM r12.6:

dtlRadio

Displays a group of option button controls with an optional text to the right.

dtlLrelMultiselbox

Displays a Multiselect box control used in most LREL pages.

dtlDatedropdown

Displays a static list of dates, such as the list that contains *In one day*, *In two days*, *In one week*, and so on.

dtlShowtext

Displays plain text as normal or bold text. Uses a JavaScript variable or simply given as input within quotes, for example "text," to the macro (see page 43).

dtlWriteproperty

Generates HTML for one property on an edit form. For example, it displays label on the left, then input field value and sample at the right. Valid input fields include a text box, drop-down list, or a check box.

dtlLrelMultiSelbox

Displays a multiselect box control for LREL forms.

startNotebook

Begins the notebook area within a form.

startTabGroup

Begins a tab group within the notebook area.

tab

Begins a tab within the tab group.

dtlShowtext Macro Example

You can display text in any required style by passing the style class as the *dataclass* argument to the macro.

The following list describes the argument options:

pageheader

Displays the text as a page header.

bold

Displays the text in bold.

required

Displays the text in required class (green).

alertmsg

Displays the text as alert message, with blue text on a yellow background.

Note: You can also specify any other style class defined in the **.css* files located in the *\bopcfg\www\wwwroot\css* directory.

This macro supports parameters that pass with the text, and the macro inserts these parameter values within the text at a specified location. For example, this macro displays the following text where 15 is the passed parameter:

(Maximum weightage: 15)

Modified Web Macros

The following list displays modified Web Macro definitions in CA SDM r12.6:

button

Adds the following parameters:

- tabIndex—Sets the default tabIndex for new buttons.

- hotkey_name—Specifies the caption for selecting the hotkey.

- Disabled—Adds the defer and hide values.

sfDropdown

Displays static list values passed as arguments.

dtlReadonly

Adds a parameter *value* when the attribute value you want to display differs from the attribute name. For example, you specified *assignee* as the attribute name, but the value displays as *analyst.comboname*.

dtlDropdown

Generates a list of drop-down values when you explicitly specify the attribute name you want to display.

Modified to display static list values passed as arguments.

Note: In previous releases of CA SDM, the dtlDropdown macro displayed the common name attribute in the drop-down.

dtlTextbox

Adds the following parameters:

- value—Specifies the value that you want to display in the textbox instead of displaying an attribute of the object.

- id—Specifies the ID value for the text box.

dtlHTMLEditbox

Adds the following parameter:

className—Specifies a stylesheet class.

dtlLookup

Adds the following parameter:

common_name_attr—Identifies the name of the common name attribute.

dtlCheckboxWithDesc

Adds the following parameters:

id—Identifies the ID value of the checkbox.

func—Checks or unchecks the checkbox.

sameCol—Indicates if the checkbox and description are in the same column.

padding—Specifies the number of spaces before the checkbox.

startPageSection

Starts a section of a generic page with a light brown background color, until it reaches the endPageSection macro tag.

endPageSection

Closes the startPageSection macro tag.

startForm

Starts a generic form.

endForm

Ends a generic form.

startRow

Starts a generic row in the generic Table that can contain one or more check boxes, text boxes, and so on.

endRow

Ends a generic row.

KT Search Engine

CA SDM r12.6 installs the KT (EBR) search engine by default. Searches of the knowledge base are limited to knowledge documents. You define accessibility and defaults to all knowledge sources based on a user role. By default, knowledge documents are searchable for all user roles. Manage the KT search engine and define the settings used to manage noise words, special terms, and synonyms that are excluded or included in searches.

Note: For information about configuring and managing your Knowledge Management environment, see the *Administration Guide*.

Chapter 3: Removed Features

This section contains the following topics:

FAST Search Engine Component

The following components are not included in CA SDM r12.6:

- FAST InStream 5.1.3 (FAST) Search Engine

- FAST InStream 5.1.3 (FAST) documentation set

Note: You may continue to use FAST with CA SDM r12.6 if FAST was installed from a previous CA SDM release.

CA SDM r12.6 continues to deliver the default KT Search Engine (see page 45).

Effective June 1, 2013, CA Technologies will discontinue all Level 1 support including basic telephone support (no patches or upgrades) for the optional FAST InStream 5.1.3 (FAST) search engine component included in CA SDM r12.0, r12.1, and r12.5. Microsoft acquired FAST in April 2008 and has discontinued development and maintenance for the FAST InStream product.

More information:

SAP Integration

The SAP Solution Manager integration is no longer supported in CA SDM r12.6. Related content is removed from the *Implementation Guide*.

Note: If you are currently using the SAP integration in CA SDM r12.1 or r12.5 and plan to migrate to CA SDM r12.6, contact your local CA Support Center for additional information.

More information:

WSP List Designer and Notebook Designer

The List Designer and Notebook Designer features are removed from Web Screen Painter in CA SDM r12.6. You can use the standard drag-and-drop method to modify notebook and list controls on detail and list forms.

More information:

Chapter 4: Documentation

This section contains the following topics:

View the CA Bookshelf

The CA SDM CA Bookshelf provides your product documentation set in Section 508-compliant HTML format, and a print version of each guide. The CA Bookshelf is installed automatically with the product and you can access it by clicking the Bookshelf link in the product.

Note: You can also download and extract the CA Bookshelf for your product (a ZIP file) from CA Support Online.

To extract the ZIP file and view the CA Bookshelf

1. Use an archive product such as WinZip.

2. Extract the content to a local folder.

3. Double-click the Bookshelf.hta file in the Bookshelf folder.

    Note: If you are viewing the bookshelf on your hard drive in an Internet browser other than Microsoft Internet Explorer, you can simply open the Bookshelf.html file.

    The CA Bookshelf opens, and you can use it to view and search product documentation.

Readme File

A readme file is a single-file document that may be delivered with a CA product. While a Release Notes file is always included with CA SDM, a readme file is optional.

At the time of publication, CA SDM r12.6 does not require or include a separate readme file.

Chapter 5: System Information

This section contains the following topics:

Operating Systems

CA SDM supports a number of operating systems. CA supports each operating system for the duration of its lifecycle (as determined by its manufacturer) or until CA announces that we no longer support it.

Consider the following operating system information:

- CA Business Intelligence installation is limited to Windows operating systems. However, you can integrate CA Business Intelligence with CA SDM on all supported operating systems.

- CA SDM requires 8.3 File Name Creation.

  Note: For detailed information about configuring File Name Creation and the disable8dot3 registry entry, see the *Online Help* and support documentation for your operating system.

- CA EEM for Linux and UNIX must be installed from a command line. If you attempt to install CA EEM from the CA SDM installation media, Product Installs option, a message informs you to use a command line for installation. The command-line install uses a self-extracting shell script that guides you through the installation process.

  Note: CA EEM runs as a 32-bit application on 64-bit operating systems.

IBM AIX Operating Systems

CA SDM supports the following IBM AIX operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
5.3	(64-bit)	No	Yes	Yes
6.1	(64-bit)	No	Yes	No

For CA SDM, consider the following:

- AIX 5.3 must be at least level TL-10 for the configuration to complete successfully.

- Before installing CA SDM r12.6 (or migrating from a previous release), the IBM XL C/C++ Runtime Environment version 9.0.0.9 (or later) must be installed and running on IBM AIX servers.

- You can integrate CA SDM with CA Business Intelligence, which uses Business Objects Enterprise XI, although we do not support installing CA Business Intelligence on IBM AIX.

- CA Workflow 1.1.127 server installation is supported on IBM AIX; however, you must install the CA Workflow IDE client on Windows and Linux operating systems.

- On IBM AIX, install CA EEM by following the instructions provided when CA EEM is selected during installation.

Note: For more information about integrating products with CA SDM, see the *Implementation Guide*.

Microsoft Windows Operating Systems

CA SDM supports the following Microsoft Windows operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
Windows Server 2008	SP2 Standard Edition (32-bit and 64-bit)	Yes	Yes	Yes
Windows Server 2008	R2 Standard Edition (64-bit)	Yes	Yes	Yes
Windows Server 2003	SP2 Standard Edition (32-bit and 64-bit)	Yes	Yes	Yes
Windows Server 2003	R2 SP2 Standard Edition (32-bit and 64-bit)	Yes	Yes	Yes

For CA SDM, consider the following:

- CA Business Intelligence r3.2 installation is limited to Windows operating environments only for CA SDM r12.6. You can, however, integrate CA Business Intelligence with CA SDM on all supported operating systems.

Note: For more information about integrating products with CA SDM, see the *Implementation Guide.*

Redhat Enterprise Linux Operating Systems

CA SDM supports the following Redhat Enterprise Linux operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
5.0	x86 (32-bit and 64-bit)	No	Yes	Yes
6.0	x86 (32-bit and 64-bit)	No	No	Yes

For CA SDM, consider the following:

■ You can integrate CA SDM with CA Business Intelligence, which uses Business Objects Enterprise XI, although we do not support installing CA Business Intelligence on Redhat Linux.

■ Verify that you have the following Java libraries on Redhat Linux to launch the product installer:

    – java-1.4.2-gcj-compat-1.4.2.0-40jpp.115

    – java-1.4.2-gcj-compat-devel-1.4.2.0-40jpp.115

    – java-1.4.2-gcj-compat-devel-1.4.2.0-40jpp.115

    – java-1.4.2-gcj-compat-src-1.4.2.0-40jpp.115

■ To install CA SDM on RedHat Enterprise Linux 6.0 successfully, verify that you have the following RPM packages and their dependencies:

Required RPM

    – libXp-1.0.0-15.1.el6.i686.rpm

Dependencies

    – libXau-1.0.5-1.el6.i686.rpm

    – libxcb-1.5.1-1.el6.i686.rpm

    – libXext-1.1.3-1.el6.i686.rpm

    – libX11-1.3.2-1.el6.i686.rpm

Required RPM

    – libXtst-1.0.99.2-3.el6.i686.rpm

Dependencies

    – libXi-1.3.3-3.el6.i686.rpm

Required RPM

- openssl-1.0.0-4.el6.i686.rpm

Dependencies

- zlib-1.2.3-25.el6.i686.rpm

- libselinux-20.94-2.el6.i686.rpm

- keyutils-libs-1.4-1.el6.i686.rpm

- krb5-libs-1.8.2-3.el6.i686.rpm

Required RPM

- openldap-2.4.19-15.el6.i686.rpm

Dependencies

- db4-4.7.25-16.el6.i686.rpm

- cyrus-sasl-lib-2.1.23-8.el6.i686.rpm

Required RPM

- pam-1.1.1-4.el6.i686.rpm

Dependencies

- cracklib-2.8.16-2.el6.i686.rpm

- audit-libs-2.0.4-1.el6.i686.rpm

- **Note:** These 32-bit packages (pam-1, cracklib-2, and audit-libs-2) are required on both 32-bit and 64-bit systems.

■ Verify that you have the following pcre and libuuid packages:

- pcre-7.8-3.1.el6.i686.rpm

- libuuid-2.17.2-6.el6.i686.rpm

  Note: These 32-bit packages (pcre-7 and libuuid-2) are required on both 32-bit and 64-bit systems.

Note: For more information about integrating products with CA SDM, see the *Implementation Guide.*

Oracle Solaris Operating Systems

CA SDM supports the following Oracle Solaris operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
10	SPARC (64-bit)	No	Yes	Yes

For CA SDM, consider the following:

- You can integrate CA SDM with CA Business Intelligence, which uses Business Objects Enterprise XI, although we do not support installing CA Business Intelligence on Oracle Solaris.

- You can install CA EEM on Sun Solaris, however CA SDM on Oracle Solaris cannot use external authentication for CA EEM on Oracle Solaris. CA EEM authentication feature requires the site to move the boplgin daemon to a Windows or Linux operating systems.

- CA Workflow 1.1.127 server installation is supported on Oracle Solaris; however, you must install the CA Workflow IDE client on Windows and Linux operating systems.

Note: For more information about integrating products with CA SDM, see the *Implementation Guide.*

Novell SuSE Linux (SLES) Operating Systems

CA SDM supports the following Novell SuSE Linux operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
10	SP1 (32-bit and 64-bit)	No	Yes	Yes
11	(32-bit and 64-bit)	No	No	Yes

For CA SDM, consider the following:

- You can integrate CA SDM with CA Business Intelligence, which uses Business Objects Enterprise XI, although we do not support installing CA Business Intelligence on SuSE Linux.

Note: For more information about integrating products with CA SDM, see the *Implementation Guide*.

VMware Operating Systems

CA SDM supports the following VMware operating systems:

Release	Version	CA Business Intelligence 3.2 and Business Objects Enterprise XI	CA EEM 8.4 SP4 CR06	CA Workflow 1.1.131
ESX Server	3.0 or higher	Yes	Yes	Yes

Important! If you want to configure CA SDM on Windows in a network address translation (NAT) environment, modify the local HOSTS file with the hostname and IP address of your server. You can find the hosts file in the *\system32\drivers\etc\hosts* directory.

Database Management Systems

The following tables list the database management systems that CA SDM r12.6 supports.

Important! Consider the following information:

- For UNIX/Linux Oracle implementations, set the Oracle environment variables before you install or migrate CA SDM.

- To resolve some known issues with Oracle 11g, you *must* force case sensitivity by setting the NX.env variable as NX_ORACLE_CASE_INSENSITIVE=0. We recommend that you also set NX_DSSORT to BINARY to make the domsrvr sort case sensitive. After upgrading to the latest release of Oracle 11gR2 (which *must* include Oracle patch 10248523), you can reset NX_ORACLE_CASE_INSENSITIVE=1 for case insensitivity support.

- The installation media does not contain an embedded version of Ingres to install. This database is no longer supported.

- If you want to use a remote MDB, the database client (Oracle or SQL Server) *must* be installed on the same computer where you install CA SDM.

CA SDM supports Microsoft SQL Server on the following operating systems:

Operating System	DBMS Release
Microsoft Windows (32-bit, 64-bit)	2005 SP2, 2008

CA SDM supports Oracle on the following operating systems:

Operating System	DBMS Release
All operating systems listed under Operating Systems. (32-bit, 64 bit) **Note:** Effective with this release, we no longer support HP UNIX.	10gr2 and 11g **Note:** For an Oracle 10g DBMS, the Oracle version must be at 10.2.0.4.

System Requirements

Temporary space requirements vary from system to system. We recommend that at least 512 MB is available for the CA SDM installation purposes and 256 MB is available for the CA MDB installation. If the temporary space is less than the recommended minimum value, you can use the IATEMPDIR variable to redirect the temporary space of the installer to another folder.

The following requirements must be met or exceeded for a CA SDM server to install and run properly:

Hardware	Requirements
CPU	Single Processor 2.0 GHz minimum, Dual Processor 2.0 GHz preferred
RAM	2 GB minimum, 4 GB preferred
Disk Space	2 GB

Based on the size of your CA SDM environment, the following requirements must be met or exceeded for the product install and run properly:

Database Size	Hardware	Requirements
Small—Used for installing CA SDM in a test environment.	CPU	Single Processor 2.0 GHz minimum
	RAM	2 GB minimum
	Disk Space	4 GB minimum will increase over time to accommodate database growth

Database Size	Hardware	Requirements
Medium—The CA SDM default. The recommended setting for most CA SDM installations.	CPU	Dual Processor 2.0 GHz
	RAM	2 GB minimum, 4 GB preferred
	Disk Space	4 GB minimum will increase over time to accommodate database growth
Large—Used for large CA SDM installations.	CPU	Quad Processor 2.0 GHz
	RAM	4 GB minimum
	Disk Space	4 GB minimum will increase over time to accommodate database growth

Note: The data files directory of the database server for the MDB requires at least 2 GB of space. For the CA SDM Java Client, we recommend a single 1.0 GHz processor or better with at least 1 GB of RAM. The Visualizer server requires at least 4 GB of RAM because Tomcat uses up to 1 GB from the available server RAM. A Visualizer client *must* have at least 1 GB of RAM and preferably more.

Chapter 6: Installation and Migration Considerations

This section contains the following topics:

CA SDM r12.6 Installation

Install CA SDM from the installation media. When you start and install CA SDM on either the primary or secondary server, the following components and features are installed:

- Primary and secondary server functionality, based on how you configure the product after installation

- The SQL Server or Oracle Interface

- The Web Interface

- The ODBC Interface

Note: For detailed information about installing and configuring CA SDM, see the *Implementation Guide*.

Direct Upgrade Support

The CA SDM r12.6 installation media supports a direct upgrade from r11.2, r12.0, r12.1, and r12.5.

Important! If you have an earlier version of CA SDM, such as r11.0, you *must* upgrade to r11.2 or r12.x before running the CA SDM r12.6 installation media.

Note: If you manually added any variables to the NX.env file before migration, add the variables again manually after migration completes.

How to Migrate Data to CA SDM r12.6 on a 64-Bit Windows

Note: This information applies to 64-bit Windows only.

Complete the following steps to migrate data to CA SDM r12.6:

1. Install the Oracle 32-bit client.

2. Establish the connection with Oracle_Server_SID.

3. Create a Local Net Service Name and test the connection.

4. Edit the PATH variable to have oracle_client home and remove server home from PATH, as shown in the following example:

    C:\app\Administrator\product\11.2.0\client_1\bin

5. Execute pdm_configure with ORACLE_HOME set to client_home, as shown in the following example:

    C:\app\Administrator\product\11.2.0\client_1\

6. Install CA SDM r12.6.

How to Migrate Data to CA SDM r12.6 on a 64-Bit Linux/UNIX

Note: This information applies to 64-bit Linux/UNIX only.

Complete the following steps to migrate data to CA SDM r12.6:

1. Install the Oracle 32-Bit client.

2. Establish the connection with Oracle_Server_SID.

3. Create a Local Net Service Name and test the connection.

4. Edit the ORACLE_HOME and PATH variables to have oracle_client home and remove server home, as shown in the following example:

    ORACLE_HOME= /opt/app/product/11.2.0/client_1
    PATH= /opt/app/product/11.2.0/client_1/bin

5. Set LD_LIBRARY_PATH and LIBPATH to the client-lib which are 32 -bit binaries, as shown in the following example:

    LD_LIBRARY_PATH=/opt/app/product/11.2.0/client_1/lib

6. Execute pdm_configure with ORACLE_HOME set to client_home, as shown in the following example:

    C:\app\Administrator\product\11.2.0\client_1\

7. Install CA SDM r12.6.

User Interface Migration Considerations

Important! The migration information in this document supersedes the migration information in the *CA SDM Implementation Guide*. Use the information in this document for migrating to CA SDM r12.6.

Before you upgrade to CA SDM r12.6, consider the following user interface migration information:

■ Migration backs up forms automatically. If you used customized HTMPL forms (see page 61) in CA SDM r12.0, r12.1, or r12.5, you *must* customize them again after upgrading to CA SDM r12.6.

■ After you upgrade, modify all customized HTMPL forms that contained notebook controls to include the new web macros and provide the appropriate tab group names. You modify <PDM_NOTEBOOK> statements to <PDM_MACRO name=startNotebook> and <PDM_TAB> statements to <PDM_MACRO name=TAB> in WSP.

More information:

Customized Form Migration

Run the *migrate_to_r12_6_web_check.pl* script if you customized HTMPL forms in a previous release of CA SDM. This script renames all customized web forms, style sheets, Java scripts, images, and macros in the site/mods directory. The script provides a list of incompatible files.

Note: The script does not restore files from backup folders to the legacy or site/mods directories as in previous releases of CA SDM.

More information:

Customized Web Macro Migration

CA SDM r12.6 does not migrate customized web macros (.mac files) in the
\site\mods\www\macro directory. The product no longer supports these web macros.

Note: If you customized web macros in a previous release of CA SDM, review the user
interface changes in CA SDM r12.6 to determine if you still need these customizations. If
you need the customizations, contact CA Support at http://ca.com/support for
migration assistance.

More information:

PDM_MACRO Statements for UI Controls (see page 33)

Chapter 7: Known Issues

Known CA Products Issues

Known issues exist that affect the behavior and success of using CA products and components with CA SDM.

GRLoader Compatibility

The General Resource Loader (GRLoader) for CA SDM is distributed at level r12.6 and is backward compatible with all previous releases of CA CMDB.

Important! We recommend that you use GRLoader distributed with CA SDM r12.6.

The following considerations apply to GRLoader:

- The GRLoader utility that is distributed with CA CMDB r11.x is not compatible with CA SDM r12.6. Upgrade the utility to the version that is distributed with CA SDM r12.6.

- For any third-party product that uses GRLoader, reinstall all the files and directories in the java\lib directory, according to the instructions in the *CA CMDB Technical Reference Guide*.

- Earlier releases of GRLoader, for example, GRLoader distributed with CA Cohesion ACM, may require an upgrade. Apply the appropriate patch.

- (Solaris only) When running GRLoader using pdm_task, the environment variable $NX_ROOT must *not* be exported from pdm_task. Prevent exporting $NX_ROOT, by doing one of the following:

    - Temporarily comment out the line where $NX_ROOT is exported.

    - Add a small script so that $NX_ROOT is not exported when pdm_task runs GRLoader.

Note: In non-Windows operating environments, it can be useful to invoke GRLoader using pdm_task GRLoader <arguments>.

How to Review the Log Files

If a CA Business Intelligence installation fails, review the log files for further information. The log files contain error codes, presented as return values from certain functions.

The log files (ca-install.log, CA_Business_Intelligence_InstallLog.log) are located at the top level of the CA Business Intelligence installation directory. During the installation process, they are located in a temporary location, determined by the TEMP environment property on the system. If the installation fails, you can locate the log file in this temporary location.

If you encounter a problem, do the following:

1. Open CA_Business_Intelligence_InstallLog.log and check if any errors are reported.

2. Open the ca-install.log file.

   This file is large and contains log details.

3. Scroll down to the bottom of the file and check if any errors are reported.

4. Search for BIEK_GetExitCode to check the returned value of the BIEK_GetExitCode function.

   If the returned value is not 0, an installation error exists.

5. Search for keywords, such as Error, Warning, CMS, or InfoStore to figure out the cause of the error.

Priority Calculation Generates Urgency Value After Saving Self-Service Tickets

By design, priority calculation generates Urgency values only after self-service users save incidents. Self-service users, such as VIP employees, employees, and anonymous users, can view the generated value after saving a ticket.

For self-service users, priority calculation uses the following settings and values to generate Urgency values:

■ Urgency_On_Employee is set to Yes in Options Manager

■ Override Urgency value is enabled in the active priority calculation for incidents

■ *Web.cfg* Urgency settings such as AnonymousUrg for anonymous users, ESCEmpUrg for VIP employees, and EmpUrg for all other employees

- Area Urgency values

- Manual user overrides

The following table summarizes how priority calculation sets the Urgency value for self-service incidents:

Self-Service User Action	Urgency Value
The user saves an incident with the default Urgency and an empty Incident Area.	The ticket shows the default Urgency value from the *web.cfg*.
The user saves an incident after overriding the Urgency value.	Regardless of the Area Urgency, *web.cfg*, or priority calculation settings, the ticket shows the Urgency value that the user selected.
The user saves an incident after selecting an Incident Area. The Incident Area does not have a predefined Area Urgency value.	The ticket shows the default Urgency value from the *web.cfg*.
The user saves an incident after selecting an Incident Area that has a predefined Area Urgency value. The Override Urgency option is also enabled on the active priority calculation for incidents.	If the Area Urgency value is greater than the Urgency in the *web.cfg*, the ticket shows the Area Urgency value. However, the updated Urgency field is not visible while the user is creating or editing the ticket. When the user saves and reopens the incident, the updated Urgency value appears on the incident.
The user saves an incident after selecting an Incident Area that has a predefined Area Urgency value. However, the Override Urgency option is disabled on the active priority calculation for incidents.	The ticket shows an Urgency value from the *web.cfg*.
The user edits an existing incident that has an Incident Area with a predefined Area Urgency value.	The Urgency drop-down list shows the Area Urgency value and all applicable *web.cfg* values.

Note: For information about setting Urgency values for self-service users, see the *Implementation Guide*.

CA SDM Fails to Start When CA Products Using Previous Versions of eTPKI Are Installed After CA SDM

Valid on Windows systems with other CA products installed after CA SDM

Symptom:

The following message occurs while CA SDM is starting:

Unable to connect to DB

CA SDM fails to start when CA products with earlier versions of eTPKI are installed after CA SDM.

Solution:

To avoid this issue, do the following:

1. Edit the system path: Move the PROGRA~1\CA\SC\CAPKI\Windows\x86\32\lib directory to the beginning of the path.

2. Start CA SDM.

Error Adding Scoreboard to a Multi-Frame Form

Valid on all operating systems

Symptom:

When you add the Scoreboard to a multiframe form, the following error occurs:

`Error: window.parent.scoreboard has no properties`

For example, this problem occurs when you do the following:

1. Create a multiframe form.

2. Add the Scoreboard to one of the frames.

3. Publish the form.

4. Add the form to a tab, and the tab to a role.

5. Log in to CA SDM using the role to which you added the tab or form.

   The following error message appears:

   `Error: window.parent.scoreboard has no properties`

Note: For information about these steps, see the *Online Help*.

Solution:

Do not use the Scoreboard with multiframe forms in CA SDM r12.6.

Error While Launching the CA Process Automation Process Viewer

Valid on all operating systems

Symptom:

When a user tries to launch the CA Process Automation Process Viewer from CA SDM, the following error message appears:

```
Unable to launch the application. [Client name][Publisher][From]
```

Solution:

The CA Process Automation installer uses the host name of the computer where it is installed to populate the information in the CA Process Automation configuration files. For CA Process Automation to operate properly, the host name has to be a reachable name from all computers that access CA Process Automation from CA SDM. If there is an issue with the hostname value that is set during installation, the Administrator can change a CA Process Automation configuration file to resolve the problem.

1. On the CA Process Automation server open the %InstallationDir%\server\c2o\.config\OasisConfig.properties file.

2. Change the oasis.local.hostname to a value that is reachable from both the CA Process Automation server and from CA SDM workstations.

   Note: Verify that the new hostname matches the CA SDM Options Manager value set in the caextwf_processdisplay_url option.

3. Restart the CA Process Automation server.

   The user can launch the Process Viewer from CA SDM. The host name is reachable from every computer that accesses CA Process Automation from CA SDM.

Dependant CIs Belonging to Service Family Do Not Display on the Change Scheduler

Symptom:

Dependant CIs that belong to the CI families: Enterprise Service and Service do not display on the Change Scheduler if the Service family in the table ci_resource_family has an table_extension_name different from "serx."

Solution:

Change the table_extension_name for the Service family to "serx."

Help Set Redefinition Error

Valid on all operating systems

Symptom:

When you remove topics from a help set, the topic headings are not removed from the Table of Contents.

For example, this problem occurs if you do the following:

1. Create a Help Set.

2. Associate the Help Set with a newly created role.

3. Edit the Help Set definition and remove some of the content.

4. Log in to CA SDM using the role with the edited help set.

5. Launch the online help and examine the Table of Contents.

    The help topics you edited out are still listed in the Table of Contents.

Solution:

1. Create a help set rather than edit one.

2. Edit the role to attach the new help set.

Note: For information about these steps, see the *Online Help*.

Configuration Item Reconciliation Attributes Are Not Tenant Aware

Valid on all systems with a multi-tenancy installation

Symptom:

The user cannot create a configuration item because it conflicts with another configuration item owned by a different tenant. The following reconciliation attributes are not tenant aware:

- Name

- Serial Number

- Hostname

- DNS Name

- Asset Tag

Solution:

To prevent this conflict, append the name of the tenant to one or more of the reconciliation attributes.

Support Automation Creates a Temporary Folder Named CA-SupportBridge

Symptom:

When end users and analysts use Support Automation, they cannot locate the temporary Support Automation folder. The temporary folder stores files, such as executables, from the end-user client and Support Automation Analyst Interface.

Solution:

The temporary folder created by the applications is named CA-SupportBridge, such as in the following directory:

```
C:\Documents and Settings\All Users\Application Data\CA-SupportBridge
```

Purge on a CA Support Automation r6.0 SR1 eFix5 Database Does Not Export Inactive Users

After running the historical data purge script on the CA Support Automation r6.0 SR1 eFix5 database, inactive users (those that have not been involved in an assistance session during the retained history time period) are not exported to the CA SDM r12.6 database.

Mouse-Over Previews Fail in IE 7

In Internet Explorer 7, mouse-over previews (hover windows) fail to open on List forms in CA SDM when the Active scripting internet security option is disabled. You can manage this option in Internet Options, Security, Custom Level, Security Settings.

More information:

Mouse-Over Preview (see page 17)

Known Client Issues

Known issues exist that affect the behavior and success of using clients within CA SDM.

The Support Automation Web Client End User Does Not Launch

Symptom:

The web chat client session can only be launched after closing the existing browser and opening a new browser. You encounter the following problems when you configure the supportautomation_url with an IP address:

- The web client end user does not launch after the first web client end-user session is closed. The Post Logout page displays the following message: Your Live Assistance Session is complete.

- Different web client end-user consoles are merged with the existing web client session when you try to launch a different web client end-user console on the same computer in the same browser window.

Solution:

If the supportautomation_url configuration uses an IP address which has an existing host name mapping, the HTTP request processing resolves to this host name. You can change the configuration of supportautomation_url to the host name or you can remove the mapping of the IP address to host name to resolve the issue.

Error Message Appears When Launching the Support Automation Analyst or End-User Clients

Valid on Internet Explorer 7 and 8

Symptom:

For the Support Automation end-user client, if your CA SDM site is in an Internet zone (or any other zone) with a security level higher than Medium-Low, Internet Explorer blocks pop-up windows and the end user is not able to launch the Support Automation client.

For the Support Automation analyst client, if your CA SDM site is in an Internet zone (or any other zone) with a security level higher than Medium-Low, Internet Explorer blocks downloads and launches from IFRAME, and the analyst is unable to launch Live Assistance.

Solution:

For the Support Automation end-user client, move the CA SDM site to the Trusted Sites Zone and set the security level to Medium-Low, or allow pop-up windows from the CA SDM site.

For the Support Automation analyst client, move the CA SDM site to the Trusted Sites Zone and set the security level to Medium-Low. You can also set a Custom security level by setting the Enable for Downloads and Automatic prompting for file downloads options.

Unable to Export Schedule on Internet Explorer

Valid on Windows

Symptom:

Exporting the Change Order Schedule does not function correctly when Enhanced Security is enabled in Internet Explorer (IE). The Enhanced Security option prevents IE from displaying the download prompt that the Export button creates for the user. The Enhanced Security option is only available on server installations of Windows.

Solution:

Disable the Enhanced Security option in IE.

Cygwin Environment Causes Application Problem

Symptom:

I can launch CA Service Desk Manager Java applications from a Cygwin environment using an AIX server, but the application buttons are not operable.

Solution:

This behavior is a problem with the Cygwin environment. Use a different emulator.

Large and Extra Large Fonts Do Not Display Properly

Valid on Windows 2003 with Internet Explorer 7 and 8

Symptom:

When you use the Control Panel, Accessibility Options to select a large font scheme like High Contrast Black (large) or High Contrast Black (extra large), CA SDM does not inherit the font settings.

Solution:

To properly display large and extra large fonts on Internet Explorer 7 and 8, do the following:

1. Select Tools, Internet Options.

2. On the General tab, click Accessibility.

3. Select Ignore Font Sizes Specified on Web Pages and click OK.

4. On the browser, select View, Text Size and change the text size.

Large and Extra Large Fonts Do Not Display Properly with Firefox 3.0

Valid on Windows 2003 with Firefox 3.0

Symptom:

When you use the Control Panel, Accessibility Options to select a large font scheme like High Contrast Black (large) or High Contrast Black (extra large), CA SDM does not inherit the font settings and the browser does not display the fonts properly.

Solution:

To properly display large and extra large fonts on Firefox 3.0, do the following:

1. Select Tools, Options.

2. On the Contents tab, select the Size and click OK.

Firefox Limitations in Knowledge Management

Valid on Windows and Linux

When using Firefox browsers, you can experience the following limitations in Knowledge Management:

Symptom:

From the Design Tab in the HTML Editor, you cannot delete previously saved text entered in the Resolution field of a knowledge document.

Solution:

You can delete previously saved text from the Source tab in the HTML Editor.

Symptom:

In Knowledge Management, a Firefox security setting can prevent you from using Cut, Copy, and Paste functions.

Solution:

To enable Cut, Copy, and Paste functions, modify your browser security preferences.

Note: For more information about configuring browser preferences, see mozilla.org.

Web Interface Renders Incorrectly in Internet Explorer

Valid on Windows

Symptom:

I experience any of the following problems:

- The web interface does not render correctly when I log in to the Analyst interface

- I cannot log on as a customer or employee.

- The guest login link is not on the page or the button is incorrect.

- Internet Explorer is using the Enhanced Security Configuration and the Internet zone does not allow you to run any script.

Solution:

Complete one of the following tasks:

- Create a custom security level in IE to enable most entries or add the server *hostname* to the Local Intranet zone.

- Log on as Administrator and disable the Enhanced Security Configuration in Internet Explorer.

JavaScript Updates Cause Pages to Appear Incorrectly in Internet Explorer

Valid on Internet Explorer 8 and 9

Symptom:

I migrated to CA SDM r12.6, or I modified CA SDM by updating JavaScript files. The updates do not display in the web interface correctly. JavaScript errors may also appear.

Solution:

A setting in Internet Explorer prevents the deletion of Temporary Internet Files from favorite sites and you *must* clear the browser cache.

Complete the following steps:

1. Click Tools, Internet Options.

2. Click Delete in Delete Browsing History.

3. Disable the Preserve Favorites website data option and verify that the Temporary Internet files check box is selected.

4. Click Delete.

   The browser deletes the files.

5. Click OK on the Internet Options dialog.

Cannot View a Zero-Size Knowledge Attachment

Symptom:

When I do any of the following:

- Attach a zero-size file to a Knowledge document

- Replace an existing Knowledge document file with a zero-size file

and attempt to view the file, the following message appears:

The file 'zero-size.txt' is empty or does not exist.

Solution:

Do not attach a zero-size file to a Knowledge document or replace an existing Knowledge document with a zero-size file.

If you attach a zero-size file to a Knowledge document and want to view the file

1. Right-click the Attachments page and select Refresh.

   The Attachments page refreshes.

2. Click the attachment link.

   The attachment opens.

If you replace an existing Knowledge document with a zero-size file, you cannot view the file.

JAWS and Auto Forms Mode

Symptom:

Starting with JAWS r10, when Auto Forms Mode is on, you can move the cursor to the lookup link, but you cannot display the lookup window.

Solution:

Turn off Auto Forms mode.

To turn off Auto Forms Mode

1. Start the Configuration Manager.

2. Select Set Options, Form Mode Options.

3. Clear Enable Auto Forms Mode and click OK.

4. Select File, Save.

   The new configuration is saved.

5. Select File, Exit.

JAWS r10 and the Tab Key

Symptom:

When you use JAWS r10 and tab through the CA SDM web interface, the focus can reach the main Help menu and stop. Other JAWS releases have not exhibited this behavior.

Solution:

To free the focus from the main Help menu, do one of the following:

- Press the Tab key quickly one or more times.
- Use JAWS to navigate to a specific link.

JAWS and Firefox 3.5.5

When used with Firefox r3.5.5, JAWS r10.0.1167 and JAWS r11.0.734 read alert messages incorrectly after you click Save or Search in a CA SDM list page or detail page.

JAWS reads alert messages correctly when they are displayed automatically, for example, when you select a link on a tree menu.

Magnifier Does Not Focus

Valid on Mozilla Firefox

Symptom:

The screen magnifier focus is not exposed automatically on all fields when moving between the fields.

Solution:

The magnifier (ZoomText 9.1 Magnifier Reader) has limited support for Firefox. Use an Internet Explorer 7.0 or 8.0 browser.

Accessibility Issues with Firefox

When Firefox web browser (all releases) is used, CA SDM web page styles are disabled, and the end user encounters the following accessibility issues:

- To remove styles from a CA SDM web page, the user must invoke the View, Page Style, No Style menu command several times in Firefox.
- Pop-up windows appear with styles enabled.

Through testing, CA Technologies has found that this Firefox issue can be resolved by using third-party add-ons provided by Firefox. Additionally, the Using Screen Reader user preference must be enabled in CA SDM. For assistance, contact CA Support at http://ca.com/support.

Search-As-You-Type Works Differently for Japanese with Firefox

When Firefox is used with the Japanese version, the analyst must commit characters (such as exiting the IME process) to see matching results with Search-As-You-Type. Japanese characters in Firefox are not processed until the characters are released (no longer underlined or highlighted) by the Japanese Input Method Editor (IME).

More information:

Known Configuration Issues

Known issues exist that affect the behavior and success of configuring CA SDM.

Configuration Failure on 64-bit Oracle

Valid on 64-bit Oracle 10g and 11g

Symptom:

The configuration fails and the following error messages appear on 64-bit Oracle:

- In the stdlog: "Unable to connect to Oracle database mdbadmin on server"

- In the checkdb.0 log: "Unable to load the OCI library or DLL. Cannot continue!"

Solution:

Install the latest 32-bit Oracle client, and do the following:

- On Windows, verify that the path includes the directory for the 32-bit Oracle libraries.

- On UNIX, set the library path variable so it points to the 32-bit Oracle library.

Note: The problem can also occur when migrating from a previous release of CA SDM. If the error occurs during migration, install the client and run the migration.

Configuration Fails on SQL Server That Uses a Non-Default TCP/IP Port

Valid on SQL Server

Symptom:

I configured SQL Server with a non-default port (not 1433). CA SDM configuration fails when I apply patches. The following errors appear in the configure.log:

```
01/24 09:24:47.801 INFO Task.java 214 Running: Applying patches
01/24 09:25:00.984 INFO ProcessUtilities.java 572 Process
C:\PROGRA~1\CA\SERVIC~1\bin\sql_check_db.exe completed with exit code 99
01/24 09:25:00.984 ERROR PatchDatabaseTask.java 449 Can't connect to the database.
```

Also, if SQL Server runs on a remote server listening to a non-default TCP/IP port, I cannot connect to the remote database during configuration.

Solution:

Instead of entering the SQL Server node name in the Database Server Node field, enter the server node name followed by a comma and the correct port number. For example, enter **servernode,1435**. Also, enter the port number in the SQL Listening Port field.

Warning Message Appears When Implementing CA SDM

Valid on SuSE 11 only

Symptom:

During the CA SDM installation, configuration, or uninstallation procedures, the following warning message appears:

libxcb: WARNING! Program tries to unlock a connection without having acquired a lock first, which indicates a programming error. There will be no further warnings about this issue.

Solution:

Disregard the warning; it has no impact on the installation, configuration, or uninstallation procedures.

IPV6 Address Fails to Connect

Valid on all operating systems

Symptom:

A primary or secondary server is configured for either mixed mode or IPV6-only mode and the browser or standard logs show connection failure messages.

Solution:

Verify that the primary server, secondary server, or client can resolve the IPV6 address by name. Verify that the CA SDM address is a valid IPV6 address. For example, the IPV6 address is a routable IPV6 global address instead of an unrouted FE80 address.

To resolve IPV6 address connection issues on the servers or clients, do the following:

1. On the primary or secondary server, run the following CA SDM Java 1.6.0 command-line utility:
   ```
   java –cp $NX_ROOT/java/lib/checkprotocols.jar
   com.ca.ServicePlus.ipv6.tools.getByAddress [address] [slump_port] [protocol]
   ```

   For example, to obtain IPV4 addresses for the Sd16 node, enter java –cp $NX_ROOT/java/lib/checkprotocols.jar com.ca.ServicePlus.ipv6.tools.getByAddress Sd16 2100 IPV4.

   address/node

   Specifies the named address/node name of the primary or secondary server (either local or remote).

slump port

Specifies the TCP slump port number. For example, 2100.

protocol

(Optional) Specifies the IPV4 or IPV6 protocol. When you omit the protocol, the default supplies both IPV4 and IPV6 addresses.

The utility lists information for the specified server node.

2. Use the data from the command line utility to verify that the routable CA SDM addresses are correct and are the same addresses that are on the DNS or name resolving servers entries.

3. If the addresses still do not resolve, specify the local and remote addresses for the CA SDM servers in one of the following files:

   ■ (Windows) <system drive>:\windows\system32\drivers\etc\hosts

   ■ (UNIX/Linux) /etc/hosts

   Note: Use the server information from the command line utility to update the *hosts* file. Follow the instructions in the hosts file to add the CA SDM server node names.

4. If remote clients cannot connect to CA SDM, do one or more of the following:

   ■ Verify that the DNS name servers have the correct addresses.

   ■ Enter the IPV6 address directly into the browser.

Unable to Switch Databases on Upgraded System

Valid on all operating systems

Symptom:

When switching databases, such as from Oracle to SQL Server, after upgrading to CA SDM r12.6, the configuration fails.

Solution:

Edit the *install.properties file* (located in $NX_ROOT/site) and set the following values:

■ packages.casqldb = 1

■ packages.capdmorc = 1

Multi-Site Synchronization Issues When Using a Windows and AIX Combination

Valid on Multi-Site systems with Windows and AIX combinations

Symptom:

You experience synchronization issues when configuring Multi-Site systems with a combination of Windows and AIX master and regional servers.

Solution:

1. Open *NX.env.*

2. Uncomment the Fast Channel entry.

3. Cycle CA SDM.

Oaserver Fails to Start if CA SDM and FAST ESP Installed on Same Server

Valid on Windows

Symptom:

Oaserver fails to start on a server with both FAST ESP and CA SDM installed.

Solution:

Oaserver uses a fixed port number (1706), while FAST ESP uses an unused port. If FAST ESP and CA SDM are installed on the same server, always start CA SDM first. It is possible that FAST ESP uses port 1706 when it starts before CA SDM.

Note: We recommend that you install CA SDM and FAST ESP on separate servers, because FAST ESP requires considerable resources. These applications perform better when they are installed on different servers.

To resolve a port conflict

1. Shut down both CA SDM and FAST ESP services.

2. Start CA SDM and allow it to initialize.

3. Start FAST ESP.

You can check port usage on Windows using the netstat -o command. If FAST ESP is using port 1706, the output from netstat appears similar to the following:
```
TCP hostname:1705 localhost:1706 ESTABLISHED pid
TCP hostname:1706 localhost:1705 ESTABLISHED pid
```

hostname

> Identifies the name of the server.

pid

> Identifies the process ID of the FAST ESP qrserver process.

Uninstall CA SDM Manually

Symptom:

During uninstall, a message informs me to refer to the *Release Notes* for manual uninstall instructions.

Solution:

The installvariables.properties file is missing from the NX_ROOT/SDUninstall folder, however, the file is required to uninstall CA SDM. Perform the following procedures to resolve this problem.

To uninstall CA SDM manually on Windows operating environments

1. Shut down CA SDM.

2. Remove the file %WINDIR%\paradigm.ini.

3. Remove the CA SDM installation folder. For example, the default folder location is C:\Program Files\CA\Service Desk Manager.

4. Remove the CA\Service Desk Manager folder from % ALLUSERSPROFILE%\ Start Menu\Programs.

   The product is uninstalled.

To uninstall CA SDM manually on UNIX operating environments

1. Shut down CA SDM.

2. Remove the symbolic link /opt/CAisd.

3. Remove the CA SDM installation folder. For example, the default folder location is /opt/CA/ServiceDeskManager.

   The product is uninstalled.

CA CMDB Visualizer Fails to Start on Secondary Server

Valid on all operating systems

Symptom:

When CA CMDB Visualizer is configured on a secondary server, the following error message appears on the Visualizer login screen:

```
Loading application configuration data. Application is not ready to use. Please contact your Administrator.
```

Solution:

Stop and then restart CA CMDB Visualizer tomcat on the secondary server as follows:

1. Run the following commands at the command prompt:

   ■ pdm_tomcat_nxd -d STOP -t VIZ

   ■ pdm_tomcat_nxd -d START -t VIZ

2. Log on to Visualizer.

   The Visualizer application opens.

Known Database Issues

Known issues exist that affect the behavior and success of using Oracle or SQL Server.

Oracle and CI Name Search

On Oracle 10g r2 and Oracle 11g r1, if you search for an existing CI Name that is longer than 67 characters, the search fails. This problem does not occur on Oracle 11g r2.

Oracle 10gR2 Client Contains the Incorrect Patch Level

Valid on Oracle

Symptom:

Installing to a remote MDB fails to connect to the database when the command line *sqlplus* connects through the *mdbadmin* user.

Solution:

At a minimum, install the Oracle 10gr2 Patch 4 (10.2.0.4). Verify that you patched Oracle up to a patch level that includes Oracle bug 3807408.

Complete one of the following steps based on your version of Oracle.

- 10.2.0.1.0 Patch 4: Apply Patch 4923768 or later

- 10.2.0.2.0 Patch 5: Apply Patch 5383042 or later

- 10.2.0.3.0: Apply Patch 5337014 or later

Patch 5383042 upgrades 10.2.0.2.0 to Patch 4.

Note: You can also patch 10.2.0.1 to 10.2.0.2 (4547817) and then apply the patch and follow the procedure in Patch 5383042.

Oracle 11g Release 1: Enable Case-Sensitive Search Capabilities within CA SDM

Valid on all operating systems

Symptom:

When using CA SDM r12.6 with Oracle 11g Release 1, unexpected results can occur due to a case-sensitivity issue. For example, the following problems can occur:

- Documents can be associated with the wrong categories.

- Data partitioning may not work as intended.

- The Web UI may become unresponsive when a list of relationships is displayed.

Solution:

To *resolve* this issue, use Oracle 11g, Release 2. You can download Oracle 11g Release 2 from the Oracle Metalink Support page.

To *avoid* this issue, enable case-sensitive search capabilities within CA SDM. In the NX.env file, set the NX_ORACLE_CASE_INSENSITIVE=variable to 0 instead of the default, 1, and restart services.

Note: For problem resolution, BUG ID No. 7335665 has been assigned to the Oracle development group.

Incorrect Search Results When Using Wildcards on Oracle

Valid on Oracle 11g R2

Symptom:

I use the underscore (_) and question mark (?) wildcards in a search and an incorrect number of results appear.

Solution:

Avoid using an underscore or question mark when you want the number of returned records to be accurate. These wildcards work on SQL Server searches.

Known Documentation Issues

The following issues were identified in the CA SDM documentation set after publication.

CA Business Intelligence Support

CA SDM r12.6 supports CA Business Intelligence r3.2. The CA SDM r12.6 documentation set incorrectly references r3.1, but the referenced information is valid for r3.2.

More information:

CA Business Intelligence (see page 15)

References to the FAST Search Engine

While references to the FAST InStream 5.1.3 (FAST) search engine component remain in the CA SDM r12.6 documentation set, the CA SDM r12.6 installation media does *not* include the FAST search engine. These references do not apply to new CA SDM r12.6 customers.

More information:

FAST Search Engine Component (see page 47)

Incorrect References to CA APM r12.5

The following topics in the Administering MDRs chapter of the *Administration Guide* reference CA APM r12.5 instead of CA APM r12.6:

- Set Up a CA APM MDR Provider
- Launch in Context from CA CMDB to CA APM
- MDR Name

The product functions as documented in these sections.

Incorrect References to CA SDM r12.5

The CA SDM r12.6 documentation contains some topics that reference CA SDM r12.5. Unless stated otherwise in the following section, all documentation delivered with the product supports your use of the current product release.

Administration Guide

The *Administration Guide* contains some topics that reference CA SDM r12.5 and CA CMDB r12.5; however, these topics are valid for CA SDM r12.6.

CA CMDB Technical Reference Guide

The *CA CMDB Technical Reference Guide* contains references to CA SDM r12.5 instead of CA SDM r12.6; however, these topics are valid for CA SDM r12.6.

Implementation Guide

The *Implementation Guide* contains some topics that reference CA SDM r12.5 and CA CMDB r12.5; however, these topics are valid for CA SDM r12.6.

Online Help

The *Online Help* contains references to CA SDM r12.5 instead of CA SDM r12.6; however, these topics are valid for CA SDM r12.6.

Server Configuration Help

The *Server Configuration Help* contains references to CA SDM r12.5 instead of CA SDM r12.6; however, these topics are valid for CA SDM r12.6.

Visualizer Help

The *Visualizer Help* contains references to CA SDM r12.5 instead of CA SDM r12.6; however, these topics are valid for CA SDM r12.6.

Incorrect References to the Manual Migration Script File Names

The *Implementation Guide* incorrectly references the script files as migrate_to_r12_5.vbs and migrate_to_r12_5.sh. To start migration manually, run *migrate_to_r12_6.vbs* (Windows) or *migrate_to_r12_6.sh* (UNIX).

Incorrect Reference to the Post-Migration Script File Name

The *Implementation Guide* incorrectly references the *migrate_to_r12_5_web_check.pl* script. The correct file name is *migrate_to_r12_6_web_check.pl* and the script is located in the $NX_ROOT/bin directory.

More information:

Incorrect Reference to the SAP Integration

The *Online Help* contains a topic named *SAP Options* in the Administration chapter. This topic references the SAP integration in CA SDM r12.5, which no longer applies because this integration is not supported in CA SDM r12.6.

More information:

Incorrect References to the WSP List Designer and Notebook Designer

The List Designer and Notebook Designer features are removed from WSP in CA SDM r12.6. Related content remains in the *Implementation Guide* and *Web Screen Painter Online Help.* Disregard content that refers to List Designer and Notebook Designer.

Incomplete Option List for MODIFY Statement

The *Technical Reference Guide* contains an incomplete list of the status_type argument options for the MODIFY statement. The following options were not included in the *CA SDM r12.5 Technical References Guide*:

- WRITE_NEW

- NOT_WRITE_NEW

- NOT_SERVICE_PROVIDER_ELIGIBLE

The following list describes all valid options for the status_type argument in CA SDM r12.6:

status_type

Modifies the properties of the attribute to allow or prohibit null values with the following valid options for this keyword:

REQUIRED

Indicates that the attribute is required.

NOT_REQUIRED

Indicates that the attribute is not required and overrides the REQUIRED flag defined on the attribute in the base object.

WRITE_NEW

Indicates that you cannot edit the attribute after you create the object, and the attribute becomes read-only.

NOT_WRITE_NEW

Indicates that you can modify the attribute at any time and overrides WRITE_NEW if that option is the basic object definition.

NOT_SERVICE_PROVIDER_ELIGIBLE

Indicates that the object is not service provider eligible and overrides the SERVICE_PROVIDER_ELIGIBLE flag defined in the base object.

Known Installation Issues

Known issues exist that affect the behavior and success of installing CA SDM.

Supported Characters in Installation Path

Valid on operating systems with a CA Business Intelligence installation

Symptom:

The installation fails with an error regarding the characters specified in the installation path.

Solution:

The BusinessObjects installation supports only alphanumeric, spaces, dashes, and underline characters in the installation path. Modify the installation path to include these character types only.

Unable to Install or Configure CA SDM When the Install Directory Contains Spaces

Valid on UNIX/Linux

Symptom:

The install directory name contains spaces and you are unable to install or configure CA SDM properly on UNIX/Linux.

Solution:

Do not specify spaces in the installation media path and folder name.

CA EEM Installation Fails When Installing the 64-bit iGateway

Valid on Windows 2008 64-bit

Symptom:

The CA EEM installation fails while installing the 64-bit iGateway.

Solution:

Uninstall the 64-bit iGateway on your computer before you install CA EEM.

Note: The 64-bit iGateway cannot load 32-bit binaries. If your environment contains different versions of CA EEM and iGateway, you cannot install multiple instance of iGateway on the same computer. If the 64-bit iGateway exists on the computer, the installation log (igwInstall.log) displays an error message.

CA Workflow Installation Fails on a CA SDM Secondary Server

Valid on Oracle

Symptom:

The CA Workflow installation fails on a secondary server that points to an Oracle database on the primary server. When you install CA SDM on a secondary server, the CA SDM configuration does not update the ORACLE_HOME value in the NX.env file.

When the environment loads to execute the sqlplus statements during the CA Workflow installation, it sets the ORACLE_HOME value =*ORACLE_HOME_REPLACE*. The sqlplus command fails to find the required support files to execute the command, and returns an error.

Solution:

The ORACLE_HOME value in NX.env contains an invalid path to the Oracle installation. You add a number sign to comment out the value before installing CA Workflow on the CA SDM secondary server that you configured for Oracle as follows:

1. Open the NX.env file with a text editor.

2. Insert a number sign (#) before the *ORACLE_HOME=* parameter, as shown in the following example:

   #ORACLE_HOME=

3. Save the NX.env file.

4. Install CA Workflow.

   The correct system environment ORACLE_HOME value is used.

CA Workflow Installation Fails on UNIX/Linux

Valid on UNIX and Linux

Symptom:

The CA Workflow installation fails and the pdm_install_wf.log file in the $NX_ROOT/log/ directory shows the following error messages:

- Set CAPKIHOME environment variable

- Unable to initialize etpki in any mode giving up.

Solution:

Set the *CASHCOMP* variable in the shell that launches the installation media. Typically, new installs set the variable to *CASHCOMP=/opt/CA/SC*. The CA SDM r12.6 installer adds this variable to the various profile and *.login* files. After you open a new shell, verify that the variable exists and launch the installation media again.

Cannot Accept the End User License Agreement During the CA SDM Installation

Valid on VMware

Symptom:

During the CA SDM installation, the buttons for the End User License Agreement (EULA) do not display. I cannot click Accept to continue installing CA SDM.

Solution:

The buttons do not display on nonstandard screen resolutions, such as 1275X647. Modify the screen resolution so that it has a 4:3 or 16:9 aspect ratio and restart the installation.

Known Knowledge Management Issues

Known issues exist that affect the behavior and success of using Knowledge Management functionality.

Comma Not Supported in Name Fields

Valid on all operating systems

Symptom:

A comma in a name field can cause unexpected results in the display of the combined user name. For example, entering a name such as the following while creating or updating a contact record causes the combined name to display incorrectly:

- Last Name: Smith, Jr

- First Name: John

- Middle Name: <blank>

The comma causes "Jr" to appear in the first name position and "John" not to appear.

Solution:

Avoid using the comma character in a name field.

Searching for a Document That Has White Spaces in the Title Causes Failure

Valid on all operating systems

Symptom:

You create a Recommended Document from Knowledge, Search, Recommended Documents, Create New. The Title text (as displayed in Edit mode) contains a leading space or double spaces between title words.

When I type the title words and use the auto-completion feature in the Knowledge Document text field, the Knowledge Document Lookup page opens with no results found.

Solution:

You must invoke the Knowledge Document Lookup Form by clicking the link on the Create New Recommended Document page. From the Knowledge Document Lookup Form, do the following:

1. Enter the title text.

2. Search for the document.

3. Select the correct record.

Note: If you fail to do this solution and enter the title words into the text field (without observing correct white-space), auto-completion is invoked, and the Knowledge Document Lookup page opens with no results found. If no results occur, clear the search filter on the Knowledge Document Lookup page, manually enter keywords in the title into the Keywords for Advanced Search field, and click Search.

EBR Search Does Not Display Recommended Documents

Valid on all operating systems

Symptom:

Recommended documents are not listed when you use complex SQL clauses in the following areas to search for knowledge:

■   Data Partitions of Security and Role Management

■   Additional Search Arguments of Knowledge Advanced Search

Solution:

The issue appears when using KT Search Engine [FILES] option. The Fast [SEARCH_ENGINE] option functions correctly. Enable the FAST ESP search by navigating to Options Manager, Search Engine, ebr_version.

Important! The FAST search engine is unavailable to new CA SDM r12.6 customers.

More information:

Wrong Number of Documents Are Returned in Search Results

Symptom:

The incorrect number of knowledge documents are returned in search results.

Solution:

To resolve this issue, run *pdm_k_reindex +f* from the command line.

The correct number of documents appears in the search results.

Known Localization Issues

Known issues can affect how CA SDM runs on local language versions.

Installer and Component Installers Translated Incorrectly

Valid in all localized versions

Symptom:

The installer and some of the component installers display strings that are not translated correctly. For example, minor spelling or grammar problems can occur in the title bar, on buttons, or in dialogs.

Solution:

The errors have no impact on the functionality of the product.

CA EEM Install Fails on Windows 2008 SP2

Valid on all languages

Symptom:

The CA EEM install fails on Windows 2008 SP2 with the following message:

Windows 2008 sanity testing failed

Note: The message appears in English for all languages.

Solution:

Before you install the CA EEM Server on Windows 2008, do the following:

1. Run the following command from the command prompt.

    ```
    netsh-> interface-> ipv6-> show-> address
    ```

    All the interfaces in the computer that use the IPv6 link-local addresses starting with fe80 are listed.

2. Delete the link-local address starting with fe80.

    The link-local address is removed.

Note: For more information about how to remove the interface, see the Microsoft Support website and refer to KB article 929852.

Two Windows Menu Shortcuts for the CA EEM Documentation and UI Items

Valid on all localized versions

Symptom:

After upgrading CA EEM for a Non-English language OS environment, two Windows menu shortcuts for the CA EEM Documentation and UI items can appear. One item displays in the local language, and the other item in English.

Solution:

Delete the unwanted duplicate menu item.

Hot Keys Not Working in Context Menus

Valid on Japanese and Chinese localized versions

In the Japanese and Chinese localized versions, most right-click context menus do not include a hotkey character that works for each menu item. Typically, the hotkey character is placed between parentheses after the translated characters of the menu item; (_) is placed instead. In some cases, where the menu text includes English, the hot key is designated with an underscore and it works.

Reports Not Translated Correctly

Valid on all localized versions

Some of the Summary and Detail reports are not translated and some are only partially translated. None of the BusinessObjects XI reports are translated. For example, the following information is not localized or partly localized:

- Detail and Summary reports, such as for Notification Message Templates

- Some Labels in Detail and Summary reports appear in English, such as the Location List, Group List, and Contact List labels.

- Labels in the Analysis reports contain untranslated characters, such as in Japanese versions.

Some Values in the Option List Are Not Translated

Valid in all localized versions

Symptom:

The string "Auto Issue Event" is not translated in the "Value" Column of the Option List.

Solution:

Most of the fields on the Option List and Options Detail Web form with the exception of the Description field, certain Value fields such as Yes/No, and drop-down lists are not localized and appear in English. The Option List is found by navigating the left pane menu on the Service Desk Manager Administration tab to the Options Manager node and select any child node.

Localized Noise Words

Valid in all localized versions

Symptom:

Noise words for your language do not display.

Solution:

Each language has its own set of noise words that are delivered with the product.

To see the noise words for your language, run pdm_k_reindex in the same manner as when you want to add a noise word.

The noise words for your language appear.

Alias Name is not Localized

The alias name data that appears on the Attributes Alias List and the Attributes Alias Detail pages is not localized. For example, when you select Service Desk, Application Data, Codes, Attribute Aliases and click Search, the data that appears in the Alias Name column appears only in English.

8.3 File Name Creation and Extended Character Support

Valid in Japanese and Chinese localized versions

Symptom:

8.3 file name creation and extended character support are not supported.

Solution:

Perform the following steps:

1. Modify the NtfsAllowExtendedCharacterIn8dot3Name registry key to "0".

    Note: The value is set to "1" as default; manually change this setting.

2. Restart your computer.

3. Start the install.

Incorrect Table Icon Displayed

Valid in all localized versions

Symptom:

The table icon is displayed incorrectly in Web Screen Painter when you click Add Table in the Schema Designer.

Solution:

After you add data to a column in the table, the icon is displayed correctly.

Command-Line Utilities Cannot Display Special Characters

Valid in all localized versions

Symptom:

All CA SDM command-line utilities that run from a DOS command prompt do not correctly display data that is returned. In particular, Japanese characters, Chinese characters, and special Latin characters with accents such as a German umlaut or a French accent grave are not displayed correctly.

Solution:

The output of command-line utilities, for example, pdm_extract can be redirected to a file, and then successfully read using any tool that supports UTF-8 encoded characters, for example, Microsoft Notepad.

Command-Line Tools Output Strings Incorrectly on Windows

Valid in all localized versions on Windows

Symptom:

Command line utilities display incorrect characters in output.

Solution:

Use the pdm_cmd.exe program to run all command line tools. The pdm_cmd utility converts output strings of the command line tool from UTF8 to UNICODE, so it can display the output strings in a foreign language. For example, to display output characters for pdm_webcache correctly, run the following command:

pdm_cmd pdm_webcache

If the command line file name does not end with .exe, use the full file name on the command line.

For example, use the following command to publish Web Screen Painter schema changes.

`pdm_cmd pdm_publish.cmd`

Use the following command to start the ODBC driver.

`pdm_cmd pdm_odbc_start.bat`

Note: Any command line tool that displays incorrect characters must run pdm_cmd.

Spell Check Not Working as Expected

Valid in all localized versions

Spell Check is not supported in the Japanese and Chinese localized versions.

Symptom:

Spell Check suggests almost every word in Latin localized versions.

Solution:

Perform the following steps:

1. Set the lex_lang option to the correct language in the Options Manager.

2. Restart the Service Desk Service.

Only U.S. States and Canadian Provinces Display for All Localized Versions

Valid in all localized versions

Symptom:

The State list selection in the CA SDM web client only displays U.S. states or Canadian provinces regardless of the country selected.

Solution:

CA SDM includes a database table for states and provinces. The product delivers data for this table consisting of only U.S. states and Canadian provinces. States or provinces for other countries are not included in the data provided, but you can modify the ca_state_province table to include additional states for other countries.

Characters Not Displayed in Linux SuSE Installation and Configuration

Valid in Japanese and Chinese localized versions on Linux SuSE

The CA SDM installer and configuration program (pdm_configure) cannot display Japanese and Chinese Korean characters.

Hot Keys Defined as ($)

Valid in Japanese and Chinese localized versions

($) is used as the hotkey in all forms when there is no other hotkey character available. In previous versions, the hotkey was picked from a list in the alphabet. In this release, CA SDM determines the hotkey character from the corresponding English label.

Characters Not Translated During Upgrade

Valid in all localized versions on Linux and Solaris

All characters are displayed in English during the Migration step of an upgrade from Unicenter Service Desk r11.2 to CA SDM r12.6.

Email Subject Not Translated

Valid in all localized versions

The subject line is not translated in all Email notifications.

CA CMDB Visualizer Date Helper Does Not Translate the Month and the Day

Valid in all localized versions

The name of the month and days of the week are not translated in the Date Helper in the Maintenance section of the scoreboard in the CA CMDB Visualizer.

CA CMDB Visualizer Date Format Cannot Be Localized in Japanese and Chinese

Valid in Japanese and Chinese localized versions

Symptom:

The date format in Maintenance section of the CMDB Visualizer Web Client cannot be localized.

Solution:

The CMDB Visualizer Web Client displays dates in the format dd/mm/yyyy. The preferred format for Japanese and Chinese is yyyy/mm/dd.

Process Definitions in the CA Workflow IDE Appear in English

Valid in all localized versions

CA Workflow IDE process definitions are not localized and appear in English.

Support Automation End-User Assistance Session Pages Display in English

Valid in all localized versions

Symptom:

Support Automation Live Support: Assistance Session Web Page displays in English.

Solution:

All default Support Automation end user interface pages are not localized, such as the On Hold, In Session, Post-Launch, and Post-Logout pages. You can customize these pages and configure custom localizations from the Support Automation node on the Administration tab.

Knowledge Search Parse Settings Set to English in Localized Versions

Valid on all localized versions

Symptom:

From the Search node in Knowledge Administration, the Language Type setting on the Parse Settings page is set to English by default in localized versions of CA SDM. The product parses search text according to the language specified.

Solution:

Administrators can change the default language type (English) to one of the following:

Other European

Performs only European-specific processing during the search. This language type applies to French, German, Italian, Spanish, and Portuguese languages.

Korean

Performs only Korean-specific processing during the search.

Other Far East

Performs processing for other Far East languages during the search, for example, Chinese and Japanese.

CA Business Intelligence Installer Wizards Partially Translated

Valid in Japanese localized versions

The CA Business Intelligence installation is partially translated in the Japanese version. The initial and final pages are not translated and appear in English.

No CA Service Desk Report Under InfoView After CA Business Intelligence Install

Valid on all localized versions

Symptom:

You cannot see the CA Service Desk report under CA report in BusinessObjects InfoView.

Solution:

When you configure CA Business Intelligence reports (select from the DVD Menu), enter "Administrator" when prompted for the BI Admin User Name.

Illegible Characters Display in PDF Reports When Exported From BusinessObjects InfoView

Valid in Japanese localized versions

Symptom:

PDF reports exported from BusinessObjects InfoView display illegible Japanese characters in Acrobat Reader. This issue occurs when Japanese characters are not available in the Arial Unicode MS font located in the system font folder.

Solution:

To resolve this problem, do the following:

1. If you have not already done so, download the Arial Unicode MS font (ARIALUNI.TTF) from the Microsoft web site and add it to your system font folder, for example, C:\WINDOWS\Fonts.

2. In Crystal Reports, open the report and specify the Arial Unicode MS font for all columns with double-byte values.

3. Export the report to PDF format.

   The report displays Japanese characters in Acrobat Reader.

Web Screen Painter Shows English Strings While in Design Mode

Symptom:

When Web Screen Painter is in design mode, notebook tabs, buttons, menus, and menu items appear only in English.

Solution:

To view a form in another language, do the following:

1. Open the form in Web Screen Painter.

2. If you are creating a form or updating an existing form, add the new localized strings to the $NX_ROOT/sdk/scripts/msg_cat.js file.

3. Click Preview.

Note: For information about updating *msg_cat.js*, see the *Implementation Guide*.

Positions of Month and Day Options are Not Switched

Symptom:

I select the Yearly option when creating a Change Window for a Change Order. The Month and Day options appear in a different order.

Solution:

Customize the form in WSP to modify the positions of the Month and Day options.

Workshift Schedule Data Can Only Be Entered in English

Valid on all localized versions

Symptom:

If I use localized Workshift data, an error message appears when scheduling the Workshift.

Solution:

CA SDM r12.6 only supports English text for workshift schedule data, including days of the week, dates, and morning (am) and afternoon (pm).

The following examples display Workshift data in the correct formatting:

- Mon - Fri {8:00 am - 5:00 pm}

- Sun {9:00 - 12:00 2:00 pm - 4:00 pm}

- Sat 12/24/08 - 1/1/05 {8:00 - 12:00 14:00 - 4:00 pm}

- 7/4/09

Note: This restriction only applies to the Workshift schedule data. You can specify the Workshift display name in any localized language.

CA IT PAM Does Not Process Japanese Character Values Correctly

Valid on Japanese localized versions

Symptom:

I am able to install and run CA IT PAM and display characters correctly, until I run a CA IT PAM process that requires Japanese values being sent to CA SDM. This action causes the process monitor to display question marks (??) in the values and CA SDM rejects input by displaying ?? errors in stdlog.

Solution:

Important! This information supersedes the instructions in the CA IT PAM documentation.

For SQL Server

Your SQL Server database uses an incorrect collation, such as *SQL_Latin1_General_CP1_CI_AS*. You cannot change the collation after creating the SQL Server database.

1. Install SQL Server with the ability to create databases with Japanese codepages.

Known Localization Issues

2. During the CA IT PAM installation, complete one of the following tasks:

   ■ Create the database with Japanese codepages manually.

   ■ Select the Japanese codepage within the CA IT PAM installer and create the database.

   Note: If you manually create the database, match the codepages from the CA IT PAM installer drop-down list with the database codepages. The installer does not detect this option or change the default codepage from Latin. CA IT PAM does not warn you about incorrect settings.

   For Oracle

1. Verify that you created and started the CA SDM database instance with the locale set correctly. For Japanese, set the locale set to ja_JP.UTF-8.

2. Verify that CA IT PAM database also started in the Japanese locale.

Upgrade From CMDB r11.2 German and Japanese to CA SDM r12.6 Detects French Locale

Valid on German and Japanese Versions

Symptom:

When upgrading CA CMDB r11.2 German or Japanese versions to CA SDM r12.6, the Installer upgrade program automatically detects the French locale instead of the German or Japanese locale. When the French version is detected an error message appears and the installation fails. The user cannot switch to the German or Japanese locale from the Installer.

Solution:

To resolve this issue, do the following:

1. On the CA SDM server, navigate to the NX_ROOT directory.

2. Open the .GENLEVEL file for editing.

3. Replace
   `12611053G900`

   with the following:
   `11209045R4`

4. Navigate to the NX_ROOT/Site directory.

5. Open the install.properties file for editing.

6. Replace
   `locale.current=en-US`

   with *one* of the following:
   `locale.current=ja-JP (Japanese)`
   `locale.current=de-DE (German)`

7. Save your changes and run the upgrade.

   The correct locale is detected.

Installer Does Not Auto-Detect Local Languages

Valid on Windows 2008

Symptom:

The Setup Language screen in the CA SDM Installer does not automatically detect the local language on Windows 2008. To proceed with the installation, the end user must select a language in this screen. The problem occurs when the format, system locale, and location options are not specified correctly in Regional and Language Options. Additionally, the product displays misplaced special characters (commas and periods) when the Format tab in Regional and Language Options is not set to the correct language.

Solution:

Set the format, language, and system locale for your environment as follows:

1.   From the Control Panel, select Regional and Language Options.

2.   Specify a language in the Format and Location tabs.

3.   On the Administrative tab, select the Change system locale button, and specify your current system locale.

4.   Click OK.

     The format, location, and system locale are set.

Spelling Errors Appear in Translated CMDB Data Values

Valid on Spanish, Italian, Japanese, Brazilian, Portuguese, Simplified Chinese language systems

Symptom:

After data is loaded into CMDB, unexpected spelling and grammatical errors appear in the translated values for class names, family names, and relationship types.

Solution:

In CA SDM r12.6, the GRLoader utility provides a set of .rul files with the new translation values for CMDB. GRLoader .rul files appear by default in the following directory: `$NX_ROOT\java\lib\GRloader`

If you moved the GRLoader .rul files to a different directory (or server) in a previous release, then modify the .rul files to reflect the new translation values.

CA SDM r12.6 provides the following new translation values for CMDB:

Object Type	English Strings	Language	Previous Translation Values	New Translation Values
class	Pager	Spanish	Localizador	Buscapersonas
class	Portfolio Asset	Spanish	Activo de cartera	Activo de la cartera
family	Cluster.Resource Group	Spanish	Clúster.grupo de recursos	Clúster.grupo de recursos
family	Cluster.Resource	Spanish	Clúster.recurso	Clúster.Recurso
relationship	is monitored by	Spanish	está controlado por	está monitorizado por
relationship	is served by	Spanish	está proporcionado por	está servido por
relationship	authors	Spanish	autores	es autor de

Object Type	English Strings	Language	Previous Translation Values	New Translation Values
relationship	monitors	Spanish	controla	monitoriza
family	Facilities.Furnishings	Italian	Attrezzature.Mobili	Attrezzature.Mobilio
relationship	is governed by	Italian	è regolato da	dipende da
relationship	runs on	Italian	esegue su	viene eseguito su
relationship	is serviced by	Italian	è fornito da	è servito da
relationship	is served by	Italian	è servito da	è assistito da
relationship	governs	Italian	regola	governa
relationship	is administered by	Japanese	管理される	処理される
relationship	administers	Japanese	管理する	処理する
class	Portfolio Idea	Brazilian Portuguese	Idéia do Portfolio	Ideia do Portfolio
family	Investment.Idea	Brazilian Portuguese	Investimento.Idéia	Investimento.Ideia
relationship	is administered by	Simplified Chinese	的管理方是	的控制者是
relationship	is governed by	Simplified Chinese	的管理方是	的治理方是
relationship	is regulated by	Simplified Chinese	的管理方是	的调整方是
relationship	administers	Simplified Chinese	管理	管控
relationship	governs	Simplified Chinese	管理	治理
relationship	serves	Simplified Chinese	服务	提供服务
relationship	regulates	Simplified Chinese	管理	调整

Note: All data values must be encoded using UTF-8 encoding.

Missing Exclamation and Colon Characters from the Final Installation Page

Valid on French, Brazilian, Portuguese, and German versions

Symptom:

The final installation page displays text that is missing a colon (:) or exclamation point (!).

Solution:

This behavior relates to a third-party software issue and does not affect the product functionality.

Japanese Version of Online Help Does Not Open in Internet Explorer

Valid on Japanese versions

Symptom:

When a Japanese Internet Explorer is used with the Japanese version of CA SDM, the role-based *Online Help* does not display in the web interface as expected. This problem occurs for the following reasons:

- The order of statements in the SDHelp_index.htm file is incorrect.
- The Japanese IE browser defaults to the native JIS encoding instead of the Unicode (UTF-8) signature.

Solution:

To resolve this issue, update the SDHelp_index.htm file as follows:

1. Navigate to the SDHelp_index.htm file in the following directory:
   `$NX_ROOT/bopcfg/www/wwwroot/help/web`

2. Create a backup copy of this file.

3. Create a new SDHelp_index.html file (named tmp.htm in this example) by running the following command at the command prompt:
   `pdm_uconv --add-signature -f utf8 -t utf8 -i SDHelp_index.htm -o tmp.htm`

4. Replace the original SDHelp_index.htm with the new file.

   The SD_Help_index.htm file with the UTF-8 signature is updated.

5. Launch the web-based *Online Help*.

Known Migration Issues

Known issues exist that affect the behavior and success of migrating data from previous CA SDM environments.

Migration Failure on Oracle 10g

Valid on Oracle 10g

Symptom:

The migration fails with the following error messages in the log file:
```
"STDERR: Error in dbcallback. event:4 err:15"
"STDERR: Error fetching data:15"
"ERROR: (54 of 54) Tables Failed Schema Validation!"
```

Solution:

Before starting the migration on Oracle 10g, verify that SQLPlus and Oracle DB are able to communicate. If communication fails, verify that Oracle is configured with the loopback adaptor using Oracle-supplied utilities and diagnostic techniques.

Migration Does Not Back Up xlate Files Located

Symptom:

When you migrate from CA SDM r12.1 to r12.6, the GRLoader translation "xlate" files located in <nxroot>/java/lib/GRLoader are not backed up.

Solution:

If you made edits or created GRLoader translation "xlate" files located in <nxroot>/java/lib/GRLoader for any user-defined class, family, or relationship, back them up before migration.

Note: For more information about Xlate files, see the *CA CMDB Technical Reference Guide*.

Inactive Support Automation Users Set to Employee Access Type After Migration

Symptom:

Inactive Support Automation users, such as deleted Technicians, appear as Employees after migration.

Solution:

If you deleted users in CA Support Automation 6.0 SR1 eFix5, login and role associations were deleted, and the users were set to inactive. After migration, these inactive users have the Employee access type. You can delete these inactive users.

Data in Support Automation Reports Cannot Be Grouped by CA SDM Ticket Category After Migration

Symptom:

After I migrate Support Automation data to CA SDM r12.6, I cannot group or filter CA Business Intelligence reports by using the CA SDM ticket category. The Support Automation Assistance Sessions, Support Automation Assistance Sessions Metrics, and Support Automation Tool Usage Summary reports are impacted.

Solution:

The Support Automation migration script in CA SDM r12.6 does not migrate relationships between Support Automation assistance sessions and CA SDM ticket categories. After migration, the Support Automation assistance session associates with the CA SDM ticket reference number. Additionally, you *must* manually associate the assistance session to the CA SDM ticket category.

Migration Does Not Remove WorldView Class Options

Symptom:

If the installation of a previous release of CA SDM included the Change Impact Analyzer integration, the WorldView context menu includes the ManageObject and UBMClass WorldView Class options.

Solution:

Because Change Impact Analyzer is deprecated in this release, delete theses menu options manually.

To delete the menu options

1. Start WorldView.
2. Right-click any object on the WorldView map and select Edit Class.

   The Unicenter Class Wizard opens.
3. On the Class tab, select Modify Existing Class, and select the ManagedObject class.
4. On the Menu tab, select ManagedObject from the Menu Name drop-down list.
5. Scroll down in the middle field, select Impact Analyzer Sep, and click Delete.

6. Select Read Impact Analyzer in the middle field.

7. Click Delete.

8. Save and close the dialogs by clicking OK and Yes as appropriate.

    The ManagedObject class is removed from the WorldView context menu.

9. Repeat Steps 1 through 8 for the UBM Class and delete the same entries for the UBMClass Menu.

    The UBMClass is removed from the WorldView context menu.

Migration Removes the JRE Folder Location

Valid on AIX

Symptom:

When migrating to CA SDM r12.6 from a previous release, the JRE folder definition in NX.env for CA Workflow is unintentionally removed during the migration.

Note: This folder was originally created for the previous installation using the instructions in the CA Workflow Considerations topic of the *Implementation Guide*.

Solution:

To resolve this problem, perform the following tasks:

1. Reenter the following JRE folder location in the NX.env file (see Step 4 in the CA Workflow Considerations topic for more details).
    ```
    NX_JRE_INSTALL_DIR_CAWF=<JRE 1.5 folder>
    ```

2. Replace <JRE 1.5 folder> with the appropriate folder location.

    Default folder location: /opt/CAisd/jre_1_5.

3. Recycle CA SDM services (post-migration and after upgrading CA EEM and CA Workflow).

Note: For complete instructions, see the CA Workflow Considerations topic.

Incorrect Path Causes Migration Failure on UNIX/Linux

Valid on UNIX/Linux

Symptom:

When I try to migrate from CA SDM r12.1 to r12.6, migration fails with missing file or directory errors in configure.log:

```
ERROR InstallTomcatTask.java 150 catalina.policy:
/opt/CA/ServiceDesk/bopcfg/www/CATALINA_BASE/conf: A file or directory in the path
name does not exist.
ERROR InstallTomcatTask.java 150 context.xml:
/opt/CA/ServiceDesk/bopcfg/www/CATALINA_BASE/conf: A file or directory in the path
name does not exist.
```

Solution:

The CATALINA_BASE path begins with the /opt/CA/ServiceDesk directory incorrectly. This path was replaced in CA SDM r12.5 with /opt/CA/ServiceDeskManager.

Execute the following command to fix the link to the required path:

```
ln -s /opt/CAisd /opt/CA/ServiceDesk
```

Known Miscellaneous Issues

Miscellaneous known issues exist that affect the behavior and success of using CA SDM.

Values in Money Fields Truncated at Decimal Point

Valid on all operating environments

Symptom:

Including a decimal point in a money amount causes truncation of the value. This behavior applies to all fields intended to hold currency values, such as Purchase Amount and Maintenance Fee. For example, if you enter 265.50 in the Purchase Amount field, the value is saved as 265.

Solution:

Although the name of some fields implies that they are money fields, they are implemented as integers. To avoid truncation, do not use a decimal point in integer fields.

Library Errors Occur When Running Command-Line Utilities

Valid on AIX, Linux, and Solaris

Symptom:

The following library errors similar to the following occur when I run command-line utilities:

```
ld.so.1: pdm_pki: fatal: libetpki2.so: open failed: No such file or directory
Killed
```

Solution:

Add the etpki library directory to your library path. The etpki library path is typically located at /opt/CA/SC/ETPKI/lib.

CA Spectrum Infrastructure Manager Integration with CA SDM

Valid on all platforms

Symptom:

Integrating CA Spectrum Infrastructure Manager 9.2 (hotfix H03 applied) with CA SDM r12.6 produces the following issues:

- When an alarm is triggered through CA Spectrum, the associated service desk ticket is not automatically created in CA SDM as expected. A solution has not been found.
- (Solaris only) When a user closes or transfers a service desk ticket in CA SDM, the ticket is not propagated to CA Spectrum as expected.

Solution:

To resolve the ticket closure issue on Solaris, do the following:

1. Navigate to the following directory:
   $NX_ROOT/bin

2. Open the OCNotify.jar file for editing.

3. Change the permission value to 777.

   The value is set.

4. Update a service desk ticket (Incident, for example) in CA SDM.

5. Save your changes.

   The ticket is propagated to CA Spectrum.

Known Reporting Issues

Known issues exist that affect the behavior and success of reporting functionality in CA SDM.

Central Management Server (CMS) Not Starting

Valid on all operating systems with a CA Business Intelligence installation

Symptom:

When you start the BusinessObjects server and use the Central Configuration Manager to verify that all servers have successfully started, the Central Management Server (CMS) can unexpectedly stop.

Solution:

Your CMS database is located on the same server and the database service has not yet started.

To start the CMS

1. On the CMS properties Dependency tab, add the database service according to the database you are using (for example, Microsoft SQL Server).

2. In the Central Configuration Manager, right-click Central Management Server.

    The pop-up menu appears.

3. Select Start.

    The CMS starts.

Admin or InfoView Pages Do Not Display Properly After Installation

Valid on all operating systems with a CA Business Intelligence installation

Symptom:

After installing CA Business Intelligence, the end user is unable to view Admin or InfoView pages.

Solution:

To resolve this problem, restart Tomcat manually.

Configure InfoView Log On Page

Valid on Windows

Symptom:

The InfoView Log On page is not configured to prompt users for their authentication type or CMS name. Configuration is controlled through the web.xml file.

Solution:

Configure the web.xml file for the InfoView Log On page as follows:

1. From the deployment directory on your web server, open the web.xml file for editing.

   Note: The web.xml file is stored in the following location when using the CA SDM installation media with Tomcat as the web server: SharedComponents\CommonReporting3\Tomcat55\webapps\InfoViewApp\WEB-INF

   Example: C:\Program Files\CA\SC\CommonReporting3\Tomcat55\webapps\InfoViewApp\WEB-INF

2. To prompt users for their authentication type, locate the *authentication.visible* parameter and change the <param-value> from false to true. For example, <param-value>true</param-value>.

3. To change the default authentication type, locate the *authentication.default* parameter and change the <param-value> to one of the following values:

   - Authentication Type Parameter Value

   - Enterprise (default) <param-value>secEnterprise</param-value>

   - LDAP <param-value>secLDAP</param-value>

   - AD <param-value>secWinAD</param-value>

4. To prompt users for their CMS name, locate the *cms.visible parameter* and change its <param-value> from false to true. For example, <param-value>true</param-value>.

5. Save and close the file.

6. Restart the web application server.

   The web.xml file for the InfoView Log On page is configured.

CA Business Intelligence Web Report Options

In Options Manager, the following options listed on the Web Reports List page are no longer relevant when configuring CA Business Intelligence to work with CA SDM and can be safely ignored.

■ bo_server_auth

– sec Enterprise

– secLDAP

– secWinAD

– secExternal

Progress OpenEdge DSN and ODBC Driver are Not Visible in ODBC Data Source Administrator

Valid on Windows 2003 R2 and 2008 R2

Symptom:

When configuring the OA server, I create a Project OpenEdge DSN named casd_*servername*. I use this DSN with pdm_isql and CA Business Intelligence. After I create the DSN, I cannot view it in the 64-bit ODBC Data Source Administrator.

I cannot edit the DSN or create a DSN using the ODBC Data Source Administrator. I am unable to point CA Business Intelligence to a different server. The 64-bit ODBC Data Source Administrator control panel does not show 32-bit drivers and configurations.

Solution:

Use the 32-bit ODBC Data Source Administrator to view the ODBC drivers by executing the following file:

`%windir%\SysWOW64\odbcad32.exe`

CA Business Intelligence ODBC Server Startup

For CA Business Intelligence reporting, if you experience problems with the startup of your ODBC server, uninstall, and then reinstall the ODBC client and server.

To uninstall the ODBC client and server

Run the following commands at the command prompt:

- oa60_client_uninstall
- oa60_server_uninstall

The client and server are uninstalled.

To reinstall the ODBC client and server

Run the following commands at the command prompt:

- oa60_server_setup
- oa60_client_setup

After you reinstall the client and server, shut down CA Business Intelligence services and restart the ODBC server.

CA SDM with CA Business Intelligence Upgrade

If you configured CA SDM as a data source for CA Business Intelligence, shut down all CA Business Intelligence services before upgrading to CA SDM r12.6.

CA Business Intelligence Integration Issue

Valid on all systems with a CA Business Intelligence installation

Symptom:

The CA Business Intelligence integration no longer works after upgrading to CA SDM r12.6. The TrustedPrincipal.conf file that contains the Shared Secret password for trusted authentication is not preserved. The TrustedPrincipal.conf file must contain the Shared Secret password entered in the Central Management Console.

Symptom:

After the upgrade, replace the TrustedPrincipal.conf file as follows:

1. Navigate to the following directory on the CA SDM server:
    $NX_ROOT\migrate\tor12_6\prer12_6\bopcfg\www\CATALINA_BASE\webapps\CAisd

2. Copy the TrustedPrincipal.conf file to the following directory:
    $NX_ROOT\bopcfg\www\CATALINA_BASE\webapps\CAisd

    The TrustedPrincipal.conf file is replaced.

Note: For more information about configuring trusted authentication, see the *Implementation Guide*.

Known Security Issues

Known issues exist that affect the behavior and success of security in CA SDM.

Antivirus Software Can Delay CA SDM Startup

Valid on Windows

Symptom:

In some situations, antivirus software running on the same computer as CA SDM can delay CA SDM startup by 2 minutes or more. Typically, after a few minutes, the startup continues.

Symptoms include messages in the stdlog indicating a network connection cannot be made and CA SDM appears suspended for several minutes.

If the delay occurs during migration, the migration can fail as the migration process times out waiting for services to start.

Solution:

Disable the antivirus software before you start CA SDM. If the problem resolves, try configuring the antivirus software to relax restrictions on opening network ports, upgrade the antivirus software, and contact the vendor.

To complete migration, temporarily disable the antivirus software during the entire migration process.

LDAP Using TLS on a Windows AD Server Stalls or Fails

Valid on Windows

Symptom:

A Microsoft bug causes LDAP client applications that use more than one connection to stall or fail while using TLS encryption. When the server uses TLS encryption with LDAP groups enabled, CA SDM can use a second connection in each LDAP Agent process. CA SDM encounters one or more of the following symptoms:

- LDAP queries, synchronizations, or imports stall. A time-out can also occur with one or more ldap_agent.exe processes running continuously at or near 100 percent usage of one CPU core.

- LDAP queries, synchronizations, or imports fail with Server Down errors.

- LDAP queries, synchronizations, or imports return no errors and no results.

Solution:

If you use TLS encryption for LDAP, we do not recommend using LDAP groups with Windows Active Directory servers. You can either disable TLS or LDAP groups.

To disable TLS encryption or LDAP groups, do the following:

1. Terminate all ldap_agent.exe processes that are continuously using a large portion of CPU time.

2. If you are unable to log in to CA SDM to access the Options Manager, stop the CA SDM service. In the $NX_ROOT/*NX.env* file, set one of the following options to No, and then stop and restart the CA SDM service:

   - NX_LDAP_ENABLE_GROUPS (LDAP Groups)

   - NX_LDAP_ENABLE_TLS (TLS Encryption)

3. In Options Manager, disable either the ldap_enable_groups (LDAP Groups) option or the ldap_enable_tls (TLS Encryption) option.

4. If the CA SDM service is running, stop the service.

5. Restart the CA SDM service.

Users Can Edit CIs Created with UAPM 11.3.4

Symptom:

Previous releases of CA SDM restricted update of selected fields in CIs (assets) which were created by UAPM. After migration to CA SDM r12.6, you can edit all fields in those CIs.

Solution:

Apply the latest UAPM r11.3.4 patches and run the update scripts.

Automatic Login to InfoView Fails

Valid on all operating systems with a CA Business Intelligence installation

Symptom:

During the CA Business Intelligence installation, a CA Technologies web cookie is installed by default that lets you automatically access BusinessObjects InfoView from the CA SDM Reports tab without logging in. If access is restricted through your web browser privacy settings, the application fails to execute, and a login prompt appears on the Reports tab.

Solution:

If you encounter this issue, adjust your web browser Internet Options, Privacy settings so that CA Technologies web cookies are allowed on your system.

Warning Messages Appear When Generating Stub Classes

Valid on all operating systems

Symptom:

When using the AXIS tool WSDL2JAVA to compile stub files, warning messages appear.

Solution:

These warning messages are common when using AXIS 1.4 and cannot be avoided. The stub files are still created successfully.

Online Help Error Messages

Symptom:

Some context-sensitive online help pages produce a script error, although the online help topic displays correctly.

Solution:

The script errors can occur when script error notification is enabled in your browser. You can ignore these error messages, or you can disable script error notification on the Tools, Internet Options, Advanced tab.

Crystal Reports List of Values Does Not Refresh

Valid on Windows

Symptom:

When scheduling Crystal Reports, the List of Values (LOV) is not refreshed when you open a Crystal report parameter to select values.

Solution:

This behavior is a known issue for BusinessObjects. A fix is expected in BusinessObjects XI Release 2 Service Pack 5. After CA Technologies testing of this Service Pack, a download will be made available on http://ca.com/support. You can use the following workaround to refresh the LOV before scheduling Crystal reports:

1. Click Start, Programs, Business Objects XI Release 2, Business Object Enterprise and select Business Object Enterprise Java Administration Launchpad.

2. Click Central Management Console.

3. Click Folders from the Organize section.

4. Click CA Folders.

5. Click CA Service Desk.

    The list of reports appears.

6. Click a Crystal report. For example, select Active Change Orders Aging by Groups.

    The report properties page appears.

7. Click the following options:

   a. Refresh Options on the Properties tab.

   b. Select All.

   c. Refresh Report.

   d. Update.

8. Repeat Steps 6 and 7 to refresh other Crystal reports.

CA Workflow Process Definitions Are Not Imported Automatically

Symptom:

The CA Workflow process definitions and actors are not imported automatically when starting CA Workflow due to incorrect locale variable settings on UNIX/Linux.

Solution:

After installing CA Workflow, use *one* of the following methods to resolve this issue:

To import CA Workflow process definitions and actors

1. Set the environment variables of LANG and LC_ALL to UTF-8 in a prompt for your operating system environment. For example, on Oracle Solaris the environment variable appears as: LANG=en_US.UTF-8.

2. Stop and then restart the CA Workflow Tomcat server as follows:

   ■ Run pdm_tomcat_nxd -d STOP -t CAWF.

   ■ Run pdm_tomcat_nxd -d START -t CAWF.

   The CA Workflow process definitions are imported.

To import the CA Workflow process definitions and actors manually

1. Use the IDE client to open CA Workflow.

   Note: The IDE client is only available on Windows and Linux operating systems.

2. Locate the process definition and actor xml files, for example:
   $NX_ROOT/site/Workflow/data/actors and
   $NX_ROOT/site/Workflow/data/process directories.

3. Select File, Import, Process Definition, select all the XML files for import, and click Open.

4. Select all the definitions and click Import.

   The process definitions are imported.

5. Select File, Import, Actors, select all the XML files for import, and click Open.

    The actor xml files are imported.

6. Select all the actor files and click Import.

    The CA Workflow process definitions are imported.

CA Workflow IDE Login as User Other than Root Sets Incorrect URL

Valid on Linux

Symptom:

When a nonprivileged user launches CA Workflow IDE on Linux, the URL is set incorrectly to https://servername:8443/pm. Java errors appear on screen, and the login to CA Workflow is unsuccessful.

Solution:

1. Launch the CA Workflow IDE client.

2. Change the URL to: http://servername:8090/pm

    Login is successful.

ADT Installation Fails

ADT is a component of CA CMDB.

Symptom:

The following message occurs during ADT installation:

Failed to retrieve installed directory of PEC!

If this message occurs during ADT installation, the installation ends when you click OK. As a result, ADT does not install correctly and any subsequent installation of the Federation Adaptors can fail also.

Solution:

A problem with Microsoft CMD.EXE causes this problem, as documented in the Microsoft knowledge base as Q156276.

To resolve the problem

1. Perform *one* of the following actions:

    ■   Copy the installation media to a local hard drive and run the install from the local hard drive.

    ■   Follow the recommended action in http://support.microsoft.com/?kbid=156276 and restart the installation after updating the Windows Registry.

2. Continue to install CA CMDB Federation Adapters.

    ADT is installed.

Federation Adapter Installation Problem

Federation Adapters are components of CA CMDB.

Symptom:

The following message occurs during Federation Adapter installation:

ODBC Login failed for data source IDB. ORA 12504:TNS: listener was not given the SERVICE_NAME in CONNECT_DATA

Solution:

To resolve the Federation Adapter installation problem

1. Test your Oracle connectivity.

2. Verify that the environment variable ORACLE_HOME specifies the Oracle installation location.

3. Restart the computer.

4. Install Federation Adapters.

    The Federation Adapters components are installed.

Duplicate Definition Messages

Symptom:

Because CA CMDB r12.6 automatically creates the attributes and triggers for your customized extension tables, the stdlog can include the following harmless message for extension tables that were created in previous releases:

Ignoring duplicate definition

Solution:

To eliminate these messages, remove the following attributes from your custom extension tables:

- id SREL nr;

- version_number INTEGER { ON_CI INCREMENT 1; };

- creation_date DATE { ON_NEW SET NOW ; };

- creation_user STRING { UI_INFO "AUDITLOG"; ON_NEW DEFAULT USER ; } ;

- last_mod_dt last_update_date DATE { ON_NEW SET NOW ; ON_CI SET NOW; } ;

- last_mod_by last_update_user STRING { UI_INFO "AUDITLOG"; ON_NEW DEFAULT USER ; ON_CI SET USER ; } ;

- delete_flag del SREL actbool { ON_CI DEFAULT 0; };

- mdr_name LOCAL STRING;

- mdr_class LOCAL STRING;

Errors Occur When CA Wily Data is Loaded into CA CMDB

Symptom:

The GRLoader.log file produces errors when CA Wily data is loaded into CA CMDB as CIs.

The following is an example of the log entry:

```
11/07 00:44:52.662 ERROR grCI 504 Error trying to insert CI. Error setting attr
'ext_asset' on object 'enttx:C0766E809BEE4E49B9D03277CF60BD23' to value
'nr:C0766E809BEE4E49B9D03277CF60BD23'
```

Solution:

CA Wily integration includes an older version of GRLoader. Use the version of GRLoader that ships with CA SDM r12.6 to import the data successfully.

Unable to Launch CA Cohesion ACM Tree Detail for a CI with a Class Map

Valid on all systems with a CA Cohesion ACM integration

Symptom:

In CA CMDB, clicking the Cohesion (MDR) button on the Attributes Tab opens the CI in ACM, but ACM displays the following error:

No target objects have been selected

When a CI has been correctly associated with a Cohesion MDR, the mapping for the CI appears.

Solution:

To import CIs from a Cohesion MDR, use the default map class instead of a customized map class. Verify that the target MDR has a URL that can be launched.

Note: For more information about using CA Cohesion ACM with CA CMDB, see the *Implementation Guide* and *Online Help*.

Tenant Column on Contacts List

Symptom:

In multi-tenancy Setup mode, you create the service provider tenant. However, you are unable to view the Tenant column on the Contacts List to verify this action.

Solution:

After you create the service provider tenant, do the following:

1. Clear the browser cache.

2. Log out and log in again.

3. Go to the Contacts List to verify the tenant change.

    The Tenant column is displayed.

Multi-Tenancy and Visualizer

The Visualizer uses the Administrator role for impersonation purposes. A user with this role must have rights to see *ALL TENANTS*. If this user does not have ALL TENANTS rights, then Visualizer launch (stand-alone or in context) can fail.

Example: Visualizer Session Error

When Visualizer is launched in context for a CI, the following Visualizer session error appears:

Authentication failed for user

Symptom:

Tenant Access for the impersonation role is set to *Single Tenant*.

Solution:

To launch Visualizer in context without this error, set the Administrator role to *Tenant Access to All Tenants*.

Visualizer Relationship Performance

CMDB Visualizer can process approximately 2500 relationships on its graphical canvas. If a Visualizer request contains more than 2500 relationships, then Visualizer performance can degrade.

Underscore (_) In Visualizer Server Name

Valid with Internet Explorer 7

Symptom:

When you use Internet Explorer 7 to access CMDB Visualizer, an underscore (_) in a server name can cause an error. The following message can appear:

Connection to Server Refused

Solution:

This message indicates an Internet Explorer 7 restriction. To resolve this problem, use the server IP address instead of the server name in the Visualizer URL.

Set Browser Locale for Visualizer

CMDB Visualizer adapts itself to the client-browser locale, which can display a different language from your localized CA SDM. To view the same language in Visualizer, set the browser locale to the CA SDM language.

To set the browser locale in Internet Explorer

1. Select Tools, Internet Options, General tab, Languages.

2. Add the language you want and move it to the top.

3. Open the new IE browser window (or refresh the browser).

   Visualizer displays the language of the localized CA SDM.

To set the browser locale in Firefox

1. Select Tools, Options, Content tab, Languages section.

2. Add the language you want and move it to the top.

3. Open the new Firefox browser window (or refresh the browser).

   Visualizer displays the language of the localized CA SDM.

Known Upgrade Issues

Known issues exist that affect the behavior and success of upgrading from a previous release of CA SDM.

Modify Tomcat Delivered with CA SDM r11.2

If you are upgrading from CA SDM r11.2 and are using a version of Tomcat other than the default (4.1.31), follow these instructions before upgrading to CA SDM r12.6.

For Windows:

1. Modify the following line in the NX_ROOT\NX.env file to specify the path of the version you are using:

   @NX_TOMCAT_INSTALL_DIR= C:\Program Files\CA\SharedComponents\Tomcat\4.1.31

2. Modify the following lines in the NX_ROOT\site\config.properties file:

   web.tomcat_home= C:\Program Files\CA\SharedComponents\tomcat\4.1.31

   web.tomcat.service_name=Apache Tomcat 4.1

   web.tomcat.version=4.1.31

3. Install CA SDM r12.6.

Note: Any customizations made to the NX_ROOT\bopcfg\www\CATALINA_BASE\conf server.xml have to be manually updated to the server.xml (5.5.25) after configuration is run. An example would be SSL setup for Tomcat.

For UNIX:

1. Modify the following line in the NX_ROOT/NX.env file to specify the path of the version you are using:

   @NX_TOMCAT_INSTALL_DIR=/opt/CA/SharedComponents/tomcat/4.1.31

2. Modify the following lines in the NX_ROOT/site/config.properties file:

   web.tomcat_home=/opt/CA/SharedComponents/tomcat/4.1.31

   web.tomcat.service_name=Apache Tomcat 4.1

   web.tomcat.version=4.1.31

3. Install CA SDM r12.6.

Note: Any customizations made to the NX_ROOT/bopcfg/www/CATALINA_BASE/conf server.xml have to be manually updated to the server.xml (5.5.25) after configuration is run. An example would be SSL setup for Tomcat.

MDB Patch 17261861 Oracle for Windows

Symptom:

MDB patch 17261861 Oracle for Windows has an error that prevents an upgrade to MDB r1.5.

Solution:

MDB patch 17615776 includes the fix for this problem. Install patch 17615776 before upgrading to MDB r1.5 (CA CMDB r12.0 and CA CMDB r12.1 use this MDB version).

Note: CMDB-UAP Integration Patches RO2252 and RO02288 both include MDB patch 17261861 Oracle for Windows. If you have installed RO2252 or RO02288, and you are using an Oracle database, contact CA Technical Support for information about how to obtain the MDB patch and how to install it.

Upgrade Fails from Unicenter Service Desk, CA CMDB r11.2, and Visualizer

Valid in all languages

Symptom:

The following error message displays when you upgrade your Unicenter Service Desk, CA CMDB r11.2, and Visualizer installations to CA SDM r12.6:

The environment variable CMDBVISUALIZER_HOME has been detected. This system appears to have CMDB Visualizer installed. This installation cannot continue. Cancel this installer. Remove CMDB Visualizer by 1) executing the Uninstaller separately; 2) Reboot the Operating System; 3) then run this installer again.

Solution:

Manually uninstall CA CMDB Visualizer before you perform the upgrade.

Live Assistance, Live Chat, and Join Analyst Now Links Are Missing

Symptom:

After upgrading from Unicenter Service Desk r11.2 with CA Support Automation r6.0 SR1 eFix5 to CA SDM r12.6, the Support Automation Live Chat and Join Analyst Now links on the Employee page do not appear.

Solution:

After you upgrade to CA SDM r12.6, remove the home.htmpl file from the following directory so that the folder does not contain any files:

NX_ROOT\site\mods\www\htmpl\web\employee\Employee

Symptom:

After upgrading from Unicenter Service Desk r11.2, CA Service Desk r12, or r12.1 without CA Support Automation r6.0 SR1 eFix5 to CA SDM r12.6, the following Support Automation options do not appear:

- The Live Assistance button on the Assigned Queue list page.

- The Live Chat and Join Analyst Now links on the Employee or Customer home pages.

Solution:

Support Automation uses the Analyst and End User default access levels. Because you upgraded from a CA SDM release that did not include Support Automation, assign the access level manually after upgrading.

CA SDM Upgrade Fails if the UTF-8 Locale is Not Installed

Valid on UNIX and Linux

Symptom:

The CA SDM upgrade fails when the UTF-8 locale is not installed before upgrading.

Solution:

CA SDM must run on the UTF-8 locale on UNIX and Linux operating systems. Before upgrading to CA SDM r12.6, verify that you have installed the UTF-8 locale.

Printed Knowledge Documents Contain Large Spaces After Migration

Valid on all operating systems

Symptom:

Customers upgrading from Unicenter Service Desk r11.0 to CA SDM r12.6 experience a printing problem for Knowledge Documents. Printed documents display a large space after the Resolution section when the documents contain embedded images.

Solution:

Complete the following steps:

1. On the Administration tab, navigate to Knowledge, Documents, Document Templates.

2. Open a Knowledge Document template.

3. Locate the <TD> tag in the HTML section and add the following code:

   ```
   <TD vAlign=top><SPAN
   class=clsTextBlackXXsmall><SPAN>{TAG_RESOLUTION}</SPAN></SPAN></TD> </TR>
   ```

4. Repeat this change for all default Document Templates.

More information:

Direct Upgrade Support

Appendix A: Third-Party Acknowledgements

CA SDM has dependencies on third-party software products. Before using CA SDM, you must accept all license agreements.

Dependencies on Third-Party Software

CA SDM installs and uses the following third-party software:

- Apache License 2.0
- DB2 Driver for JDBC and SQLJ
- Jaxen 1.1
- JDBC 10.2.0.3
- JDOM 1.1
- Java 2 Runtime Environment 1.4.2
- JDK 1.6.0_23
- WSDL4J 1.5.1
- Zlib 1.2.3

Apache License Version 2.0

The Apache License Agreement pertains to the use of the following software:

- Apache Axis 1.4
- Apache Axis 2
- Apache Commons FileUpload 1.1.1
- Apache Commons IO
- Apache Commons Lang 2.4
- Apache Commons Logging 1.1.1
- Apache CXF 2.2.9 and subcomponents
- Apache HTTP Web Server 2.2.15
- Apache Jakarta Regexp v.1.3

- Apache JAXP 1.1 (see page 140)

- Apache JAX RPC (see page 140)

- Apache Log4j 1.2.15 (see page 140)

- Apache Tomcat 6.0.30 (see page 148)

Portions of this product include software developed by The Apache Software Foundation (http://www.apache.org/). 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 conversions to other media types.

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

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

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

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

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

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

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

   a. You must give any other recipients of the Work or Derivative Works a copy of this License; and

   b. You must cause any modified files to carry prominent notices stating that you changed the files; and

c. You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

d. If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the 4. 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 the License. You may add your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add your own copyright statement to your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

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

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

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

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

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

END OF TERMS AND CONDITIONS

Appendix: How to Apply the Apache License to Your Work

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[ ]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License"); you may not use this file except in compliance with the License. You may obtain a copy of the License at http://www.apache.org/licenses/LICENSE-2.0.

Unless required by applicable law or agreed to in writing, software distributed under the License is distributed on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied. See the License for the specific language governing permissions and limitations under the License.

Apache JAXP 1.1

This product includes JAXP 1.1 which was developed by the Apache Software Foundation (http://www.apache.org/). This software is distributed in accordance with the following license agreement:

 * The Apache Software License, Version 1.1

 * Copyright (c) 2000 The Apache Software Foundation. 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 end-user documentation included with the redistribution,

 *   if any, must include the following acknowledgment:

 *   "This product includes software developed by the

 *   Apache Software Foundation (http://www.apache.org/)."

 *   Alternately, this acknowledgment may appear in the software itself,

 *   if and wherever such third-party acknowledgments normally appear.

* 4. The names "Apache" and "Apache Software Foundation" must

*   not be used to endorse or promote products derived from this

*   software without prior written permission. For written

*   permission, please contact apache@apache.org.

* 5. Products derived from this software may not be called "Apache",

*   nor may "Apache" appear in their name, without prior written

*   permission of the Apache Software Foundation.

* 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 APACHE SOFTWARE FOUNDATION OR

* ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,

* SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT

* LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF

* USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND

* ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY,

* OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT

* OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF

* SUCH DAMAGE.
==

* This software consists of voluntary contributions made by many

* individuals on behalf of the Apache Software Foundation. For more

* information on the Apache Software Foundation, please see

* <http://www.apache.org/>.

* Portions of this software are based upon public domain software

* originally written at the National Center for Supercomputing Applications,

* University of Illinois, Urbana-Champaign.

*/

Apache JAX RPC

This product includes JAX RPC , which is distributed in accordance with the following license agreement:"

(2) If Apache Activemq 5.1.0 includes a "NOTICE" text file as part of its distribution, then the CA software must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that pertain to Apache Activemq 5.1.0 not used by or included in the CA software. The attribution notices should be included either (a) in a NOTICE.txt file distributed as part of the CA software, or (b) within a display generated by the CA software, if and wherever such third-party notices normally appear.

Apache Log4j 1.2.15

This product includes Log4j 1.2.15, which was developed by the Apache Software Foundation. This 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 conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or

Object form, made available under the License, as indicated by a

copyright notice that is included in or attached to the work

(an example is provided in the Appendix below).

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

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

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

2. Grant of Copyright License. Subject to the terms and conditions of

this License, each Contributor hereby grants to You a perpetual,

worldwide, non-exclusive, no-charge, royalty-free, irrevocable

copyright license to reproduce, prepare Derivative Works of,

publicly display, publicly perform, sublicense, and distribute the

Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of

this License, each Contributor hereby grants to You a perpetual,

worldwide, non-exclusive, no-charge, royalty-free, irrevocable

(except as stated in this section) patent license to make, have made,

use, offer to sell, sell, import, and otherwise transfer the Work,

where such license applies only to those patent claims licensable

by such Contributor that are necessarily infringed by their

Contribution(s) alone or by combination of their Contribution(s)

with the Work to which such Contribution(s) was submitted. If You

institute patent litigation against any entity (including a

cross-claim or counterclaim in a lawsuit) alleging that the Work

or a Contribution incorporated within the Work constitutes direct

or contributory patent infringement, then any patent licenses

granted to You under this License for that Work shall terminate

as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the

Work or Derivative Works thereof in any medium, with or without

modifications, and in Source or Object form, provided that You

meet the following conditions:

(a) You must give any other recipients of the Work or

   Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices

   stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works

   that You distribute, all copyright, patent, trademark, and

   attribution notices from the Source form of the Work,

   excluding those notices that do not pertain to any part of

   the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its

distribution, then any Derivative Works that You distribute must

include a readable copy of the attribution notices contained

within such NOTICE file, excluding those notices that do not

pertain to any part of the Derivative Works, in at least one

of the following places: within a NOTICE text file distributed

as part of the Derivative Works; within the Source form or

documentation, if provided along with the Derivative Works; or,

within a display generated by the Derivative Works, if and

wherever such third-party notices normally appear. The contents

of the NOTICE file are for informational purposes only and

do not modify the License. You may add Your own attribution

notices within Derivative Works that You distribute, alongside

or as an addendum to the NOTICE text from the Work, provided

that such additional attribution notices cannot be construed

as modifying the License.

You may add Your own copyright statement to Your modifications and

may provide additional or different license terms and conditions

for use, reproduction, or distribution of Your modifications, or

for any such Derivative Works as a whole, provided Your use,

reproduction, and distribution of the Work otherwise complies with

the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise,

any Contribution intentionally submitted for inclusion in the Work

by You to the Licensor shall be under the terms and conditions of

this License, without any additional terms or conditions.

Notwithstanding the above, nothing herein shall supersede or modify

the terms of any separate license agreement you may have executed

with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade

names, trademarks, service marks, or product names of the Licensor,

except as required for reasonable and customary use in describing the

origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or

agreed to in writing, Licensor provides the Work (and each

Contributor provides its Contributions) on an "AS IS" BASIS,

WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or

implied, including, without limitation, any warranties or conditions

of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A

PARTICULAR PURPOSE. You are solely responsible for determining the

appropriateness of using or redistributing the Work and assume any

risks associated with Your exercise of permissions under this License.

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

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

END OF TERMS AND CONDITIONS

APPENDIX: How to apply the Apache License to your work.

   To apply the Apache License to your work, attach the following

   boilerplate notice, with the fields enclosed by brackets "[]"

   replaced with your own identifying information. (Don't include

   the brackets!) The text should be enclosed in the appropriate

   comment syntax for the file format. We also recommend that a

   file or class name and description of purpose be included on the

   same "printed page" as the copyright notice for easier

   identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");

you may not use this file except in compliance with the License.

You may obtain a copy of the License at

   http://www.apache.org/licenses/LICENSE-2.0

Unless required by applicable law or agreed to in writing, software

distributed under the License is distributed on an "AS IS" BASIS,

WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.

See the License for the specific language governing permissions and

limitations under the License.

Apache Tomcat 6.0.30

This product includes Apache Tomcat 6.0.30 and certain third-party software components that were obtained from the Apache Software Foundation under various licenses set forth below, and are distributed by CA for use with this CA product in unmodified, object code form, under the CA license agreement.

The following information sets out certain notices, attributions and/or other information CA is required to provide to you by the third party licensors of these components.

The terms contained in the CA license agreement are offered by CA alone and not by the third party licensors. The contents set forth below are for informational purposes only and do not modify the terms of the license agreement between you and CA.

The third party licensors of these components provide them 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, and disclaim liability for any claim or loss, including, without limitation, direct, indirect, special, punitive, exemplary or consequential damages. Source code for Apache Tomcat may be obtained from [INSERT URL WHERE YOU OBTAINED APACHE DISTRIBUTION].

In addition, CA makes the source code for certain components contained in Apache Tomcat available at http://opensrcd.ca.com/ips/07217_3/ under the terms of their respective open source licenses. Apache Tomcat and the accompanying third-party software components are distributed in accordance with the following license agreements.

DB2 Driver for JDBC and SQLJ

CONTAINS Runtime Modules of IBM DB2 Driver for JDBC and SQLJ.

© Copyright IBM Corporation 2006. All rights reserved.

Jaxen 1.1

Portions of this product include software developed by the Jaxen Project (http://www.jaxen.org/) and is distributed in accordance with the following license agreement.

/*

$Id: LICENSE.txt,v 1.5 2006/02/05 21:49:04 elharo Exp $

Copyright 2003-2006 The Werken Company. 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 Jaxen Project 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.

 */

JDBC 10.2.0.3

This Product is distributed with Oracle JDBC Driver 10.2.0.3 from Oracle USA, Inc.
("Oracle")
The following additional terms and conditions apply to your use of the Oracle software
product ("Oracle Product"):

(1) you may only use the Oracle Product to run the CA Product; (2) to the extent permitted by applicable law, Oracle disclaims liability for any damages, whether direct, indirect, incidental, or consequential, arising from your use of the Oracle Product; (3) at the termination of this Agreement, you must discontinue use and destroy or return to CA all copies of the Product; (4) Oracle is not obligated to provide technical support, phone support, or updates to the Oracle Product hereunder; (5) CA reserves the right to audit your use of the Oracle Product and report such use to Oracle or to assign this right to audit your use of the Oracle Product to Oracle; (6) Oracle shall be a third party beneficiary of this Agreement.

JDOM 1.1

This product includes JDOM 1.1 which is distributed in accordance with the following terms:

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.

Java 2 Runtime Environment 1.4.2

This product contains Java 2 Runtime Environment (J2RE), Standard Edition, version 1.4.2_X from Sun Microsystems.

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. Licensee acknowledges 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 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#129530/Form ID#011801)

JDK 1.6.0_23

This Product is distributed with Sun JDK 1.6.0_23 (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 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. Licensee acknowledges 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 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#129530/Form ID#011801)

WSDL4J 1.5.1

This product contains wsdl4j 1.5.1 which was obtained under the Common Public License v.1.0, and is distributed by CA for use with this CA product in unmodified, object code form, under the CA license agreement.

Any provisions in the CA license agreement that differ from the Common Public License are offered by CA alone and not by any other party.

The third party licensors of this component provide it 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, and disclaim liability for any claim or loss, including, without limitation, direct, indirect, special, punitive, exemplary or consequential damages.

CA makes the source code for this component available at http://opensrcd.ca.com/ips/07217_30 under the terms of the Common Public License v.1.0. Alternatively, you may obtain the source code from http://sourceforge.net/projects/wsdl4j/.

Zlib 1.2.3

This product contains Zlib developed by Jean-loup Gailly and Mark Adler.

Appendix B: Accessibility Features

CA Technologies is committed to ensuring that all customers, regardless of ability, can successfully use its products and supporting documentation to accomplish vital business tasks. This section outlines the accessibility features that are part of *CA SDM*.

Product Enhancements

CA SDM offers accessibility enhancements in the following areas:

- Display

- Sound

- Keyboard

- Mouse

Note: The following information applies to Windows-based and Macintosh-based applications. Java applications run on many host operating systems, some of which already have assistive technologies available to them. For these existing assistive technologies to provide access to programs written in JPL, they need a bridge between themselves in their native environments and the Java Accessibility support that is available from within the Java Virtual Machine (Java VM). This bridge has one end in the Java VM and the other on the native operating systems, so it will be slightly different for each platform it bridges to. Sun is currently developing both the JPL and the Win32 sides of this bridge.

Display

To increase visibility on your computer display, you can adjust the following options:

Font style, color, and size of items

Lets you choose font color, size, and other visual combinations.

Screen resolution

Lets you change the pixel count to enlarge objects on the screen.

Cursor width and blink rate

Lets you make the cursor easier to find or minimize its blinking.

Icon size

Lets you make icons larger for visibility or smaller for increased screen space.

High contrast schemes

Lets you select color combinations that are easier to see.

Sound

Use sound as a visual alternative or to make computer sounds easier to hear or distinguish by adjusting the following options:

Volume

Lets you turn the computer sound up or down.

Text-to-Speech

Lets you hear command options and text read aloud.

Warnings

Lets you display visual warnings.

Notices

Gives you aural or visual cues when accessibility features are turned on or off.

Schemes

Lets you associate computer sounds with specific system events.

Captions

Lets you display captions for speech and sounds.

Keyboard

You can make the following keyboard adjustments:

Repeat Rate

Lets you set how quickly a character repeats when a key is struck.

Tones

Lets you hear tones when pressing certain keys.

Sticky Keys

Lets those who type with one hand or finger choose alternative keyboard layouts.

Mouse

You can use the following options to make your mouse faster and easier to use:

Click Speed

Lets you choose how fast to click the mouse button to make a selection.

Click Lock

Lets you highlight or drag without holding down the mouse button.

Reverse Action

Lets you reverse the functions controlled by the left and right mouse keys.

Blink Rate

Lets you choose how fast the cursor blinks or if it blinks at all.

Pointer Options

Let you do the following:

■ Hide the pointer while typing

■ Show the location of the pointer

■ Set the speed that the pointer moves on the screen

■ Choose the pointer's size and color for increased visibility

■ Move the pointer to a default location in a dialog box

Keyboard Shortcuts

The following table lists the keyboard shortcuts that CA SDM supports:

Keyboard	Description
Ctrl+X	Cut
Ctrl+C	Copy
Ctrl+K	Find Next
Ctrl+F	Find and Replace
Ctrl+V	Paste
Ctrl+S	Save
Ctrl+Shift+S	Save All
Ctrl+D	Delete Line
Ctrl+Right	Next Word
Ctrl+Down	Scroll Line Down
End	Line End