

# CA Clarity™ PPM

## Release Notes

Release 13.1.00, Second Edition



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## Contact CA Support

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

- 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

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

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>.

## Documentation Changes

The following documentation updates have been made since the last edition of these Release Notes:

- Supported Upgrade Paths. This topic has a change in the supported patch levels for Version 13.0 or its service packs.
- Java Runtime Environment Defects. This topic covers JRE security issues.
- CA Clarity PPM Solution Pack Compatibility. This topic includes information about installing the CA Clarity PPM Solution Pack add-in.
- Appendix B: Accessibility Features. This appendix covers accessibility setup, enhancements, and keyboard shortcuts.

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# Chapter 1: Welcome to CA Clarity PPM

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Welcome to CA Clarity PPM Release 13.1.

This section contains the following topics:

[What This Document Covers](#) (see page 7)

[Training](#) (see page 7)

[International Support](#) (see page 8)

[Knowledge Base Articles](#) (see page 8)

[Known Issues and Resolved Defects](#) (see page 9)

[Supported Upgrade Paths](#) (see page 9)

[Add-ins Compatibilities](#) (see page 10)

[CA Clarity PPM Solution Pack Compatibility](#) (see page 11)

## What This Document Covers

This document provides information about enhanced features, documentation, and system requirements for CA Clarity PPM. This release provides a CA Technologies Bookshelf that you can access from the product. For more information about the bookshelf and product documentation, see [View the CA Technologies Bookshelf](#) (see page 19).

**Note:** At publication time, the product supports the operating systems and third-party software listed in this document. The most current Release Notes is found on CA Support at <http://ca.com/support>. For complete installation instructions, see the *Installation Guide*.

## Training

For user training, CA Technologies offers the CA Productivity Accelerator (CA PA) solution. You can use this solution to create custom education materials and practice simulations and assessments. The custom education materials are used in classroom training and online simulations. Your users can access the practice simulations and assessments from the Learn link on the User toolbar or from the learning management system (LMS). The CA PA provides standard content modules that you can upload into your CA PA editor and modify to reflect your configuration of CA Clarity PPM. You can also integrate your organization's processes and procedures into the CA PA solution.

CA Education offers these training solutions. To learn more about the training offerings and CA PA, see the CA Education website at <http://ca.com/education>.

## International Support

An internationalized product is an English product that operates 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.

The product is fully localized and supports over 100 regional settings for date, time, and number formatting. The user interface is available in the following languages:

- |                        |                       |
|------------------------|-----------------------|
| ■ Brazilian Portuguese | ■ Japanese            |
| ■ Czech                | ■ Korean              |
| ■ Danish               | ■ Norwegian           |
| ■ Dutch                | ■ Polish              |
| ■ English              | ■ Russian             |
| ■ Finnish              | ■ Simplified Chinese  |
| ■ French               | ■ Spanish             |
| ■ German               | ■ Swedish             |
| ■ Hungarian            | ■ Traditional Chinese |
| ■ Italian              | ■ Turkish             |

Localized versions of some CA Clarity PPM Online Help files and guides are available within 90 days of the product general availability.

The most recent versions of localized product documentation are available at [CA Support](#).

## Knowledge Base Articles

For information about knowledge base articles, log in to the [Knowledge Base Articles page](#) on CA Support Online.



## Known Issues and Resolved Defects

### Known Issues

For information about known issues, log in to [CA Support Online](#) and search using the *clarity13open* keyword. Any related articles and known issues appear.

**Note:** For the known issues related to the product installation and new features, see the chapter “Installation and Upgrade” in the *Change Impact and Upgrade Guide*.

### Resolved Defects

For information about resolved defects, see the [Resolved Defects page](#) on CA Support Online.

### Java Runtime Environment Defects

The Java Runtime Environment (JRE) is updated frequently with fixes for security issues, including issues that are unknown at the time CA Clarity PPM is released. To ensure that you have the latest fixes, we recommend that you download the most recent version 7 JDK.

## Supported Upgrade Paths

If you have any of the following releases installed, you can upgrade to CA Clarity PPM Release 13.1:

- CA Clarity PPM Release 8.1 or Service Pack or Fix Pack 8.1.x
- CA Clarity PPM Version 12.0 or Service Pack 12.0.x
- CA Clarity PPM Release 12.1 or Service Packs

Supported patch levels:

- 12.1.0.1 through 12.1.0.8
- 12.1.1.1 through 12.1.1.7

- 12.1.2.1 through 12.1.2.3
- 12.1.3.1 through 12.1.3.3
- CA Clarity PPM Version 13.0 or Service Packs  
Supported patch levels:
  - 13.0.1.1 through 13.0.1.2

**Important!** Take caution when attempting an upgrade to Release 13.1 and you are on a CA Clarity PPM patch level that is not listed in the preceding list. You may encounter upgrade issues. For best results, wait for a supported upgrade path to a later release or patch. For more information, contact CA Support or your CA Services representative. You can also find more information on the [CA Clarity PPM Global User Community](#).

## Add-ins Compatibilities

The following list shows the add-ins to upgrade for Release 13.1:

- If you are upgrading from Version 13.0 to Release 13.1, the following add-ins are upgraded:
    - PMO Accelerator
    - Earned Value Manager
    - Connector for CA Unicenter Asset Portfolio Management
    - Connector for CA Unicenter Service Desk and CA Software Change Manager for Distributed
- Note:** If you plan to use one of the languages added for Release 13.1 (Korean, Simplified Chinese, or Traditional Chinese), upgrade all installed add-ins.
- If you are upgrading from any version before Version 13.0 to Release 13.1, upgrade all installed add-ins.

The following table shows the accelerator and connector releases that are required for Version 13.0, Service Pack 13.0.1, and Release 13.1.

Accelerator or Connector	13.0 and 13.0.1	New 13.1 Installation	Upgrade from 12.x to 13.1	Upgrade from 13.0 or 13.0.1 to 13.1
PMO Accelerator	3.0	3.1	3.1	3.1
Earned Value Manager	2.0	2.0.01	2.0.01	2.0.01
Accelerator for PRINCE2	2.0	2.0.01	2.0.01	2.0 or 2.0.01
Accelerator for the PMBOK	2.0	2.0.01	2.0.01	2.0 or 2.0.01

Accelerator or Connector	13.0 and 13.0.1	New 13.1 Installation	Upgrade from 12.x to 13.1	Upgrade from 13.0 or 13.0.1 to 13.1
Accelerator for New Product Development	2.0	2.0.01	2.0.01	2.0 or 2.0.01
PPM Essentials Accelerator	2.0	2.0.01	2.0.01	2.0 or 2.0.01
BRM Accelerator	3.0	3.0.01	3.0.01	3.0 or 3.0.01
Connector for CA Unicenter Service Desk & CA Software Change Manager™ for Distributed	2.0	2.0.01	2.0.01	2.0.01
Connector for CA Unicenter Asset Portfolio Management	2.0	2.0.01	2.0.01	2.0.01
Connector for Microsoft SharePoint	2.0	2.0.01	2.0.01	2.0 or 2.0.01
Service Connect	2.0	2.0	2.0	2.0
Catalyst Connector	2.5	2.5	2.5	2.5
Agile Vision Enterprise	Winter 2012	Summer 2012	Summer 2012	Summer 2012
Product Vision	Winter 2012	Summer 2012	Summer 2012	Summer 2012

## CA Clarity PPM Solution Pack Compatibility

Before you install the CA Clarity PPM Solution Pack add-in, verify that the compatible versions of CA Clarity PPM and the PMO Accelerator are installed. The CA Clarity PPM Solution Pack installation fails if you do not install the compatible version of the PMO Accelerator add-in before installing the solution pack.

**Important!** Review the certified and supported versions chart in the CA Clarity PPM Solution Pack Release Notes to determine if an upgrade of CA Clarity PPM and the PMO Accelerator is required, or optional. For complete information, see the [CA Clarity PPM Solution Pack Index page](#) on CA Support Online.



# Chapter 2: New and Enhanced Features

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This section contains the following topics:

[New Features](#) (see page 13)

[Enhanced Features](#) (see page 14)

## New Features

This release includes the following new features:

- [Financially-Enabled Roles](#) (see page 13)
- [Fixed Header Rows in Grid Portlets](#) (see page 14)
- [WCAG 2.0 Accessibility Support \(Level A\)](#) (see page 14)
- [Budget Merge or Replace](#) (see page 14)

## Financially-Enabled Roles

You can assign Resource Class and Transaction Class values to roles. When the team member is a role, these values are used as grouping attributes and are passed to the rate matrix.

If the Staff OBS Unit field on the Team page contains a department or location, you can create cost plans using a combination of Role and Department or Role and Location. If the Staff OBS Unit field does not contain a department or location, there is no change in behavior.

The baseline function is modified to include the new fields.

The following access rights were added for the Financially-Enabled Roles feature:

- Resource – Edit Financial  
Controls who can edit the financial properties of roles and resources.
- Resource – Edit General  
Controls the ability to edit the general properties of roles and resources, but does not allow access the Financial Properties page.

The XML Open Gateway (XOG) supports these changes.

## Fixed Header Rows in Grid Portlets

The column headers on the list views and grids remain visible as a user scrolls down the page. It also works with multiple portlets on a page and pop-ups. This functionality is available for both end-user and administration areas of the product.

## WCAG 2.0 Accessibility Support (Level A)

This release of CA Clarity PPM has achieved Level A certification in the WCAG 2.0 Accessibility Standards.

## Budget Merge or Replace

Before this release, submitting a cost plan for budget approval could only be done if the structure (grouping attributes and fiscal time period) of the cost plan was identical to that of the approved budget.

In this release, you can do one of the following actions:

- Merge the cost plan being submitted with the currently approved budget (existing functionality). This option is available only when the structures are identical.
- Replace the currently approved budget entirely, regardless of structure (new functionality). This option is available on any cost plan when at least one approved budget exists.

The XML Open Gateway supports these changes.

## Enhanced Features

This release includes enhancements to the following features:

- [New Languages Supported in the User Interface](#) (see page 14)
- [Capacity Planning Portlets for Resource Planning](#) (see page 15)

## New Languages Supported in the User Interface

The product user interface supports the following new languages:

- Korean
- Simplified Chinese
- Traditional Chinese

## Capacity Planning Portlets for Resource Planning

This release includes enhanced Resource Management and Top-Down Planning features. The Resource Planning page includes a new tab layout and two new planning portlets. The new tab layout organizes the portlets for ease of use. As you navigate from left to right, you move from high-level organizational capacity/demand metrics down to detailed booking data.

**Note:** If you are upgrading, see the *Change Impact and Upgrade Guide* for instructions about upgrading your existing Resource Planning pages and portlets.

The new Resource Planning tabs and portlets are shown in the following table.

Tab	Portlets
Capacity	Role Capacity Histogram Role Capacity
Organizational Demand	OBS Resource Aggregation OBS Investment Aggregation
Top Down Planning	Top Down Planning by Investment
Workloads	Resource Workloads
Allocations	Weekly Detail Allocation Discrepancy
Unfilled Allocations	Unfilled Requirements
Bookings	Booking Status

**Note:** The *Resource Planning* and *Resource Manager* groups have been updated to include View access rights to the new portlets and the new tabs.

The following table shows the portlets that are available for Resource Planning.

Portlet	Portlet ID	System Provider	Description of Change
Role Capacity Histogram	projmgr.roleCapacityHistogram	Roles with Resource Aggregation	This is a new portlet.
Top Down Planning by Investment	projmgr.topDownPlanning	Team Allocations	This is a new portlet.

Portlet	Portlet ID	System Provider	Description of Change
Role Capacity	projmgr.roleCapacity	Roles with Resource Aggregation	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields and added Resource Type. No fields were removed.</li> <li>Grid: No changes.</li> <li>Aggregation Row: Renamed Variance field to Remaining Capacity.</li> </ul>
OBS Resource Aggregation	projmgr.OBSResourceAggregation	OBS Resource Aggregation	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields and changed Resource OBS Type from browse to pull-down. No fields were removed.</li> <li>Grid: No changes.</li> </ul>
OBS Investment Aggregation	projmgr.OBSInvestmentAggregation	OBS Investment Aggregation	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields and changed Investment OBS Type from browse to pull-down. No fields were removed.</li> <li>Grid: No changes.</li> </ul>
Resource Workloads	projmgr.resourceWorkloads	Resources with Aggregation	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields and changed Employment from single-select pull-down to multi-select browse. No fields were removed.</li> <li>Grid: Changed TSV from displaying six weeks to displaying 10 weeks.</li> </ul>
Weekly Detail	projmgr.weeklyDetail	Team Allocations	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields and added Resource and Investment as multi-select browses. Removed Requirement Name, Resource Name, Resource ID, and Investment Name text fields.</li> <li>Grid: Changed TSV to display 10 weeks as numbers (instead of histogram).</li> </ul>



Portlet	Portlet ID	System Provider	Description of Change
Allocation Discrepancy	projmgr.allocationDiscrepancy	Actuals vs Allocation Discrepancy	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields. Added Resource and Investment as multi-select browses, Booking Status, and Investment Manager. Removed Resource Full Name, Resource ID, Investment Name, and Investment ID text fields. Added a hidden, required filter for <i>Is Role = No</i> so the portlet only displays resources.</li> <li>Grid: Added the Resource Allocation icon and a link to the right of the Resource column. Reversed the order of Investment Role/Investment Name. Renamed Investment Name to Investment. Renamed Resource Full Name to Resource.</li> </ul>
Unfilled Requirements	projmgr.unfilledAllocations	Team Allocations	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields. Added Role and Investment as multi-select browses. Removed Role Name, Role ID, and Investment Name text fields.</li> <li>Grid: Removed the Email icon from the grid because it displays only roles. Roles do not have email addresses.</li> </ul>
Booking Status	projmgr.bookingStatus	Team Allocations	<ul style="list-style-type: none"> <li>Filter: Rearranged the fields. Added Resource and Investment as multi-select browses. Removed Requirement Name, Resource Name, Resource ID, and Investment Name text fields.</li> <li>Grid: No changes.</li> </ul>



# Chapter 3: Documentation

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This section contains the following topics:

[View the CA Technologies Bookshelf](#) (see page 19)

[Documentation Changes](#) (see page 20)

## View the CA Technologies Bookshelf

The CA Technologies Bookshelf available on the Documentation page of CA Support Online provides the product documentation set in Section 508-compliant HTML format and in PDF format. You can view the CA Technologies Bookshelf online from CA Support Online, or you can download and view the bookshelf locally on your computer.

The CA Technologies Help Bookshelf is installed automatically with the product and provides the core documentation set in HTML format. You can access the Help Bookshelf by clicking the Help link in the product.

### **To extract the ZIP file and view the CA Technologies Bookshelf**

1. Use an archive product such as WinZip.
2. Extract the content to a local folder.
3. Double-click the Bookshelf.html file in the Bookshelf folder.

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

## Where to Find Documentation

You can access the product documentation in the following locations:

- Click the Help link in the product.
- The Docs directory on the installation media.
- Technical Support at <http://ca.com/support>.

## How to View and Search PDFs

To view PDF files, download and install the Adobe Reader from the Adobe website if it is not already installed on your computer.

If you open a PDF file in Adobe Reader in the CA Technologies Bookshelf and search, the individual PDF file is searched and you see the individual instances of the search term.

## Documentation Changes

The CA Clarity PPM documentation has been improved to help you find information faster. The documentation changes include the following improvements:

- **Improved Bookshelves.** The bookshelves provide a single place for you to find helpful product information. On the bookshelves, you will find links to the Release Notes, role-based documentation scenarios, product documentation, implementation information, green books, knowledge base articles, webcasts, videos, social media, educational courses, and other information.

You can find the Release Notes and bookshelves on [CA Support Online](#), and no login is required.

**Note:** These bookshelves provide a link to new restricted bookshelves that contain content that requires a login to CA Support Online (for example, the Administration Guide, the Technical Reference Guide, and so forth).

- **Role-based Documentation Scenarios.** Role-based documentation scenarios help you complete specific tasks. For example, there are scenarios on how to configure the views for an object, how to customize the Actions Menu, and how to manage authentication. All scenarios are available on the bookshelf using direct links to CA Support Online, and in both HTML and PDF format.
- **Scenarios Guide.** This new guide is provided in both HTML and PDF format.
- The product documentation that does not require a login to CA Support Online is also available through third-party search engines such as Google.
- The *Requirements Planning User Guide* is no longer included in the documentation set.

# Appendix A: Compatibilities

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This section contains the following topics:

[Compatibilities](#) (see page 21)

[CA Clarity PPM Servers](#) (see page 21)

[Integrated Servers](#) (see page 24)

[Clients](#) (see page 24)

[Products Included with CA Clarity PPM](#) (see page 26)

[Change History](#) (see page 27)

[FIPS Operating Mode Restrictions](#) (see page 30)

[IPv6 Network Compatibility Restrictions](#) (see page 30)

[CA Business Intelligence Release 3.3 - \(SAP BusinessObjects Enterprise XI 3.1 Service Pack 5\) Supported Configurations](#) (see page 32)

## Compatibilities

This appendix contains operating environment information for this release, which is also available from the Compatibilities link on [support.ca.com](http://support.ca.com).

Some of the products listed in this appendix are not delivered with CA Clarity PPM, and you must purchase the product. For information about the software that is included with CA Clarity PPM, see [Products Included with CA Clarity PPM](#) (see page 26). Refer to your licensing agreement for more information.

## CA Clarity PPM Servers

The following table shows supported platforms for servers running CA Clarity PPM server software (application and background servers).

	Oracle Solaris	Microsoft Windows	Hewlett-Packard HP-UX	Linux	IBM AIX
<b>Operating System<sup>1)</sup></b>		<ul style="list-style-type: none"> <li>Windows Server 2008 (R2) SP1 64-bit Standard Edition or Enterprise Edition</li> </ul>		<ul style="list-style-type: none"> <li>Red Hat Enterprise Linux 5.5 64-bit for x86 chipsets: any maintenance release</li> <li>Red Hat Enterprise Linux 6 64-bit for x86 chipsets: any maintenance release</li> <li>SUSE Linux Enterprise Server 10 Service Pack 4 64-bit for x86 chipsets: any maintenance release<sup>1b)</sup></li> <li>SUSE Linux Enterprise Server 11 64-bit for x86 chipsets; any maintenance release<sup>1b)</sup></li> <li>Oracle Enterprise Linux Server 6u2 64-bit for x86 chipsets; any maintenance release<sup>1c)</sup></li> </ul>	<ul style="list-style-type: none"> <li>AIX 6.1: any maintenance release</li> <li>AIX 7.1: any maintenance release</li> </ul>
<b>Upgrading Customers (Existing Installations Only)</b>	<ul style="list-style-type: none"> <li>Solaris 10 SPARC64 64-bit: any maintenance release<sup>1a)</sup></li> </ul>		<ul style="list-style-type: none"> <li>HP-UX 11iv3 IA64: any maintenance release</li> </ul>		

	Oracle Solaris	Microsoft Windows	Hewlett-Packard HP-UX	Linux	IBM AIX
<b>Virtualization</b>	See the CA Support Statement for Virtualization. To find this document, log in to <a href="#">CA Support Online</a> , go to the CA Clarity Project & Portfolio Manager Support page, scroll to the Product Status area, and click the Virtualization Support information link. For information about database virtualization, see <sup>2)</sup> under notes.				
<b>Database<sup>2)</sup></b>	Oracle 11.2 Standard and Enterprise Edition: version 11.2.0.2 or higher patch level <sup>2a)</sup> Microsoft SQL Server 2008 Enterprise Edition: Any Service Pack <sup>2b)</sup> Microsoft SQL Server 2008 R2 Enterprise Edition: Any Service Pack <sup>2b)</sup>				
<b>Database Interface</b>	CA Clarity PPM DataDirect Type 5 (v4.2) Drivers for Oracle and SQL Server (included in CA Clarity PPM distribution).				
<b>Java Runtime</b>	<ul style="list-style-type: none"> <li>■ Oracle Java SE JDK 1.7.0: version 1.7.0_4 or higher patch level (64-bit)</li> </ul>	<ul style="list-style-type: none"> <li>■ Oracle Java SE JDK 1.7.0: version 1.7.0_4 or higher patch level (64-bit)</li> </ul>	<ul style="list-style-type: none"> <li>■ HP JDK 7: 7.0.01 or higher patch level (64-bit)</li> </ul>	<ul style="list-style-type: none"> <li>■ Oracle Java SE JDK 1.7.0: version 1.7.0_4 or higher patch level (64-bit)</li> </ul>	<ul style="list-style-type: none"> <li>■ IBM Java 7.0.0 or higher patch level (64-bit)</li> </ul>
<b>Application Server<sup>3)</sup></b>	<ul style="list-style-type: none"> <li>■ Apache Tomcat 7.0.26 or higher patch level (64-bit)</li> <li>■ Oracle WebLogic 12.1.1: Any service pack (64-bit)</li> <li>■ IBM WebSphere 8.5 (64-bit)<sup>3a)</sup></li> </ul>				
<b>Report Server</b>	CA Business Intelligence™ Release 3.3 (BOXI 3.1 Service Pack 5). For more information, see <a href="#">CA Business Intelligence Release 3.3</a> (see page 32).				
<b>Mail Server</b>	Any SMTP/IMAPI/POP3 mail server can be used. CA Clarity PPM does not explicitly support any one vendor.				

**Notes:**

- <sup>1)</sup> CA Clarity PPM is supported on any localized version of the supported operating systems.
- <sup>a)</sup> The Oracle UltraSPARC T2, T3, and T4 processors are not supported. Solaris on x86 is also not supported.
- <sup>b)</sup> CA Clarity PPM on SUSE Linux connecting to a Microsoft SQL Server database is not currently supported.
- <sup>c)</sup> CA Clarity PPM on OEL 6u2 connecting to a Microsoft SQL Server database is not currently supported.

- <sup>2)</sup> Databases can be run on any vendor-supported operating system. Production databases are not supported on software virtualized operating systems. It is also recommended that any downstream environments that are intended for performance or high concurrency testing match what is used in production.
  - <sup>a)</sup> Production Databases are not supported on Virtual Environments.
  - <sup>b)</sup> Oracle Real Application Cluster (RAC) is supported.
  - <sup>c)</sup> SQL Server Named Instances is supported. SQL Server Clustering is supported with manual intervention after a database failure to restart failed background processes.
- <sup>3)</sup> CA Clarity PPM is supported on any localized version of the supported application servers.
  - <sup>a)</sup> Existing installations of WebSphere will only be supported on AIX in the next major release.

## Integrated Servers

The following table shows supported software for servers integrating with CA Clarity PPM.

<b>Single Sign On Server</b>	CA SiteMinder 12.0 Service Pack 3
<b>LDAP Server</b>	Supports any LDAP v3 compliant directory server (such as CA Directory, Microsoft Active Directory, Novell eDirectory, Oracle Directory Server, and so on).
<b>SharePoint Server</b>	SharePoint Server 2010 (64-bit), Enterprise Edition

## Clients

The following table shows supported software for client computers accessing CA Clarity PPM.

	<b>Microsoft Windows</b>	<b>Apple Mac OS</b>	<b>Desktop Linux</b>
<b>Operating System</b>	<ul style="list-style-type: none"><li>■ Microsoft Windows XP Professional: SP2 or higher</li><li>■ Microsoft Windows Vista SP2, all editions</li><li>■ Microsoft Windows 7 SP1 32-bit and 64-bit, all editions</li></ul>	<ul style="list-style-type: none"><li>■ Mac OS X: Release 10.4 or higher patch level</li></ul>	<ul style="list-style-type: none"><li>■ Any vendor or version with support for browsers listed under the Web Browser section.</li></ul>



	Microsoft Windows	Apple Mac OS	Desktop Linux
<b>Web Browser</b>	<ul style="list-style-type: none"> <li>■ Internet Explorer 8.0 and higher patch level</li> <li>■ Internet Explorer 9.0 and higher patch level</li> <li>■ Firefox 10.0.5 ESR and higher release level<sup>2)</sup></li> <li>■ Firefox 13.0 and higher release level<sup>2)</sup></li> <li>■ Google Chrome 18.0.1025.152m and higher release level<sup>2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>■ Safari: Version 5.1.1 and higher patch level</li> <li>■ Firefox 10.0.5 ESR and higher release level<sup>2)</sup></li> <li>■ Firefox 13.0 and higher release level<sup>2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>■ Firefox 10.0.5 ESR and higher release level<sup>2)</sup></li> <li>■ Firefox 13.0 and higher release level<sup>2)</sup></li> </ul>
<b>Client Applications<sup>1)</sup></b>	<ul style="list-style-type: none"> <li>■ Microsoft Excel 2007-2010 32-bit, all editions or Microsoft Excel 2003 with 2007 compatibility pack</li> <li>■ Microsoft PowerPoint 2007-2010 32-bit, all editions</li> <li>■ Microsoft Project 2007-2010 32-bit, all editions</li> <li>■ Java 7 Runtime Environment (required for Open Workbench, CA Clarity PPM Microsoft Project interface, and XOG Client): 1.7.0_4 or higher patch level</li> <li>■ Adobe Flash Player (for viewing Xcelsius dashboards). Version 10 or higher.</li> <li>■ Acrobat Reader 7.0 or higher (for viewing the product documentation and offline reports)</li> <li>■ Crystal Reports 2008 Designer Client (required only for custom report development): SP5 or higher level service pack.</li> </ul>	<ul style="list-style-type: none"> <li>■ Microsoft Office Excel 2011</li> <li>■ Adobe Flash Player (for viewing Xcelsius dashboards). Version 10 or higher.</li> <li>■ Mac OS Preview PDF viewer (for viewing the product documentation)</li> <li>■ <i>No Microsoft Project support</i></li> <li>■ <i>No Open Workbench support</i></li> <li>■ <i>No Crystal Report Designer support</i></li> </ul>	<ul style="list-style-type: none"> <li>■ Acrobat Reader 7.0 or higher (for viewing the product documentation and offline reports)</li> <li>■ Adobe Flash Player (for viewing Xcelsius dashboards). Version 10 or higher.</li> <li>■ <i>No Excel Export support</i></li> <li>■ <i>No Microsoft Project support</i></li> <li>■ <i>No Open Workbench support</i></li> <li>■ <i>No Crystal Report Designer support</i></li> </ul>
<b>Third-party SOAP Integration Toolkits</b>	<ul style="list-style-type: none"> <li>■ Microsoft Visual Studio 2005 (.NET Framework 2.0)</li> <li>■ Apache AXIS 1.3</li> </ul>	<ul style="list-style-type: none"> <li>■ Apache AXIS 1.3</li> </ul>	<ul style="list-style-type: none"> <li>■ Apache AXIS 1.3</li> </ul>

**Notes:**

- <sup>1)</sup> Using multiple versions of third-party software concurrently are not supported as it can cause out-of-sync and compatibility issues. CA Technologies supports only versions of third-party software that the vendor supports.
- <sup>2)</sup> New Firefox and Chrome releases may be supported with minimal testing after being released.

## Products Included with CA Clarity PPM

The following table includes third-party software that is licensed and delivered with CA Clarity PPM. All of the following software is included on the CA Clarity PPM installation media.

Component	Notes
Java Runtime	The JDK installers for all supported operating systems.
Application Server	Apache Tomcat for all supported operating systems.
Client Applications	Xcelsius Designer 2008 Service Pack 5

**Notes:**

- Oracle WebLogic and IBM WebSphere are not included with CA Clarity PPM. Customers who want to use either of these servers over Tomcat must acquire their licenses independent of CA Clarity PPM.
- Crystal Reports Designer is required only for custom report development and is not included with CA Clarity PPM. You can download it from [CA Support Online](#).

## Change History

### Changes in CA Clarity PPM Release 13.1.00

Component	Description
<b>Operating System</b>	<ul style="list-style-type: none"> <li>■ Added support for OEL 6u2.</li> <li>■ Added support for Red Hat Enterprise Linux 5.5 64-bit for x86 chipsets: any maintenance release.</li> <li>■ Added support for Microsoft Windows Server 2008 R2 SP1.</li> <li>■ Added support for SUSE Linux Enterprise Server 10 SP4 (64-bit) for x86 chipsets.</li> <li>■ Added support for AIX 7.1: any maintenance release.</li> <li>■ Added support for Microsoft Windows Vista SP2, all editions.</li> <li>■ Added support for Microsoft Windows 7 SP1, 32-bit and 64-bit, all editions.</li> <li>■ Dropped support for Red Hat Enterprise Linux 5 64-bit for x86 chipsets: any maintenance release.</li> <li>■ Dropped support for Microsoft Windows Server 2008 R2 (64-bit) Standard Edition or Enterprise Edition.</li> <li>■ Dropped support for SUSE Linux Enterprise Server 10 (64-bit) for x86 chipsets: any maintenance release.</li> <li>■ Dropped support for AIX 5.3: any maintenance release.</li> <li>■ Dropped support for Microsoft Windows Vista, all editions.</li> <li>■ Dropped support for Microsoft Windows 7, 32-bit and 64-bit, all editions.</li> <li>■ Dropped support for Microsoft Windows 2003 Server 64-bit Standard Edition or Enterprise Edition up to SP2.</li> </ul>
<b>Server Java Runtime</b>	<ul style="list-style-type: none"> <li>■ Added support for Oracle Java SE JDK 1.7.0_4 or higher patch level (64-bit).</li> <li>■ Added support for HP JDK v7: 7.0.01 or higher patch level (64-bit).</li> <li>■ Added support for IBM Java 7.0.0 64-bit: higher patch level (64-bit).</li> <li>■ Dropped support for Sun J2SDK 1.6.0: version 1.6.0_20 or higher patch level (64-bit).</li> <li>■ Dropped support for HP JDK 6: 6.0.05 or higher patch level (64-bit).</li> <li>■ Dropped support for IBM Java 6 64-bit: SR6 or higher patch level (64-bit).</li> </ul>

Component	Description
<b>Application Server</b>	<ul style="list-style-type: none"> <li>■ Added support for Tomcat v7.0.26 or higher patch level (64-bit).</li> <li>■ Added support for Oracle Weblogic Server 12.1.1: any service pack (64-bit).</li> <li>■ Added support for IBM WebSphere Application Server 8.5 (64-bit).</li> <li>■ Dropped support for Tomcat v6.0.35.</li> <li>■ Dropped support for Oracle WebLogic 10.3: any service pack (64-bit).</li> <li>■ Dropped support for IBM WebSphere v7.0.0.7 (64-bit).</li> </ul>
<b>Report Server</b>	<ul style="list-style-type: none"> <li>■ Added support for CA Business Intelligence Release 3.3 (BOXI 3.1 Service Pack 5).</li> <li>■ Dropped support for CA Business Intelligence Release 3.2 (BOXI 3.1 Service Pack 3).</li> </ul>
<b>Client Browser</b>	<p><b>Note:</b> CA Technologies only supports browser versions that are supported by their associated third-party vendors.</p> <ul style="list-style-type: none"> <li>■ Added support for Firefox 10.0.5 ESR and higher release level.</li> <li>■ Added support for Firefox 13.0 and higher release level.</li> <li>■ Added support for Chrome v18.0.1.25.152m and higher release level.</li> <li>■ Dropped support for Firefox 3.5.</li> <li>■ Dropped support for Firefox 8.0.</li> </ul>
<b>Client Applications</b>	<ul style="list-style-type: none"> <li>■ Added support for Xcelsius Designer 2008 Service Pack 5.</li> <li>■ Added support for Crystal Reports Designer 2008 Service Pack 5.</li> <li>■ Dropped support for Xcelsius Designer 2008 Service Pack 3.</li> <li>■ Dropped support for Crystal Reports Designer 2008 Service Pack 3.</li> </ul>
<b>Database</b>	<ul style="list-style-type: none"> <li>■ Clarified support around running databases on software virtualized operating systems.</li> <li>■ Dropped support for Oracle 10.2.0.5.</li> </ul>

## Changes in CA Clarity PPM Service Pack 13.0.01

Component	Description
<b>Client Browser</b>	<ul style="list-style-type: none"> <li>■ Added support for Firefox 10.0.</li> <li>■ Added support for Firefox 3.6.</li> <li>■ Dropped support for Firefox 8.0.</li> <li>■ Dropped support for Firefox 3.5.</li> </ul>
<b>Application Server</b>	<ul style="list-style-type: none"> <li>■ Added support for Tomcat 6.0.35.</li> <li>■ Dropped support for Tomcat 6.0.26.</li> </ul>

## Changes in CA Clarity PPM Version 13.0.00

Component	Description
<b>Server Operating System</b>	<ul style="list-style-type: none"> <li>■ CA Technologies provides support only for upgrading customers with pre-existing installations on Solaris and HP-UX.</li> <li>■ Added support for SUSE Enterprise Linux 11.</li> <li>■ Added support for RHEL 6.0.</li> <li>■ Dropped 32-bit operating systems.</li> </ul>
<b>Server DB</b>	<ul style="list-style-type: none"> <li>■ Added Microsoft SQL Server 2008 R2.</li> <li>■ Dropped support for Microsoft SQL Server 2005.</li> </ul>
<b>Server Java Runtime</b>	<ul style="list-style-type: none"> <li>■ Dropped 32-bit support.</li> </ul>
<b>Application Server</b>	<ul style="list-style-type: none"> <li>■ Dropped 32-bit support.</li> </ul>
<b>Report Server</b>	<ul style="list-style-type: none"> <li>■ Added support for CA Business Intelligence Release 3.2.</li> <li>■ Dropped support for Actuate.</li> <li>■ Dropped support for CA Business Intelligence Release 3.0.</li> </ul>
<b>Client Browser</b>	<ul style="list-style-type: none"> <li>■ Added support for Firefox 8.0.</li> <li>■ Added support for IE 9.0.</li> <li>■ Added support for Safari 5.1.1.</li> <li>■ Dropped support for IE6 and IE7.</li> </ul>
<b>Client Applications</b>	<ul style="list-style-type: none"> <li>■ Dropped support for Microsoft Project 2000, 2002 and 2003.</li> <li>■ Defined support for Crystal Reports Designer 2008 as SP3 or higher (instead of any service pack).</li> </ul>
<b>SharePoint Server</b>	<ul style="list-style-type: none"> <li>■ Added support for SharePoint Server 2010.</li> <li>■ Dropped support for SharePoint Server 2007.</li> </ul>

## FIPS Operating Mode Restrictions

Not all CA Clarity PPM platforms support RSA BSAFE Crypto-J 6.0.0.1 for FIPS 140-2 certification. The following table displays the compatible platforms and operating systems that RSA documents. While other platforms are likely to function correctly, CA Technologies cannot verify support for Crypto-J 6.0.0.1 on any other than those platforms listed here.

Platform	Operating System	Number of Bits	Release
Microsoft Windows	2008 Server	64	Oracle JDK 1.7
Red Hat Linux	Advanced Server 6.0	64	Oracle JDK 1.7
IBM AIX	AIX 6.1	64	IBM Java 7 or higher (64-bit)

## IPv6 Network Compatibility Restrictions

CA Clarity PPM is certified to operate in an IPv6 networking environment with restrictions. Other configurations of CA Clarity PPM using IPv6 are likely to work but have not been certified. For mixed IPv6/IPv4 environments, it is assumed that the server instance uses two network interface cards, one configured for IPv6 and the other for IPv4.

### Clarity Installations on Standard Configurations

Configuration	App Server	OS for App Server	Database	OS for Database	Status
1	Apache Tomcat 7.0.26 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	Certified in pure IPv6 and mixed mode.
2	Apache Tomcat 7.0.26 (64-bit)	RHEL 6.2	Oracle Enterprise Edition 11.2.0.2	RHEL 6.2	Certified in pure IPv6 and mixed mode.
3	IBM Websphere 8.5 (64 bit)	RHEL 6	Oracle Enterprise Edition 11.2.0.2	Windows 2008 R2	Certified in mixed mode.
4	Oracle WebLogic 12.1.1 (64-bit)	AIX 7.1	Oracle Enterprise Edition 11.2.0.2	Windows 2008 R2	Certified in pure IPv6 and mixed mode.

## Mail Server on a Microsoft Windows Configuration

Configuration	App Server	OS for App Server	Database	OS for Database	Mail Server	Status
5	Apache Tomcat 7.0.26 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	hMail Server 10.3.3 <sup>1)</sup>	Certified in pure IPv6 and mixed mode.

## Business Objects Testing CABI 3.3

Configuration	App Server	OS for App Server	Database	OS for Database	BO	Status
6	Apache Tomcat 7.0.26 (64-bit)	Windows 2008 R2	MSSQL 2008 R2	Windows 2008 R2	CABI 3.3	Certified in mixed mode.
7	Apache Tomcat 7.0.26 (64-bit)	RHEL 6.2	Oracle Enterprise Edition 11.2.0.2	RHEL 6.2	CABI 3.3	Certified in mixed mode.

## Mail Server on a Hybrid CA Clarity PPM Configuration with a different OS for APP and DB

Configuration	App Server	OS for App Server	Database	OS for Database	Mail Server	Status
8	Apache Tomcat 7.0.26 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	RH6	hMail Server 10.3.3 <sup>1)</sup>	Certified in mixed mode.

## Business Objects Testing CABI 3.3 on a Hybrid CA Clarity PPM Configuration with a different OS for APP and DB

Configuration	App Server	OS for App Server	Database	OS for Database	BO	Status
9	Apache Tomcat 7.0.26 (64-bit)	Windows 2008 R2	Oracle Enterprise Edition 11.2.0.2	RH6	CABI 3.3	Certified in mixed mode.

**Note:**

<sup>1)</sup> hMail is an open source mail server used for testing purposes.  
(<http://www.hmailserver.com/>)

## CA Business Intelligence Release 3.3 - (SAP BusinessObjects Enterprise XI 3.1 Service Pack 5) Supported Configurations

The following Business Objects configurations are supported for CA Clarity PPM. Additional information such as the minimum CA Business Intelligence (CABI) Release 3.3 hardware requirements can be found in the CA Business Intelligence documentation. For information about virtualization support, refer to the following SAP document: *Business Objects Support Statement – VMWare ESX Server*.

The application servers listed in the following table indicate the minimum releases tested for CA Business Intelligence Release 3.3 (BOXI Release 3.1 Service Pack 5) in integration with CA Clarity PPM. Subsequent releases (indicated by the last number in the name) are supported, but not necessarily tested in integration with CA Clarity PPM. The same applies to the application server JDKs.

**Note:** If there are network editions of any application servers listed in the following table, those network editions are not supported. Unless otherwise specified, only 32-bit versions of the application servers (with their underlying JDK) can be used.

Running CA Business Intelligence Release 3.3 has not been tested on a CA Clarity PPM system using a UNIX or Linux operating system and configured with SQL Server. In such cases, CA Technologies recommends running CA Business Intelligence Release 3.3 on a separate Windows server.



Operating System	Server Version	CABI 3.3 Application Server/JDK	Clarity Database Provider/Data Connector
Microsoft Windows	<ul style="list-style-type: none"> <li>Windows Server 2008 R2 SP1 64-bit Standard or Enterprise Edition</li> </ul> <p><b>Note:</b> Business Objects supports and recommends installation of all Microsoft critical patches for the operating systems listed. If utilizing Query as a WebService (QaaWs), .NET Framework 2.0 is required.</p>	<ul style="list-style-type: none"> <li>Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx</li> </ul>	<ul style="list-style-type: none"> <li>MS SQL Server 2008/ODBC SQL Native Client 10, MS SQL Server 2008 JDBC (Sqljdbc.jar 3.0), OLE DB SQL Native Client 10</li> <li>MS SQL Server/Microsoft JDBC 1.2 for SQL Server 2005, Microsoft ODBC SNAC (native client), Microsoft OLEDB SNAC (native client)</li> <li>Oracle 11g R2/Oracle Net Client 11g R2, Oracle JDBC 11g R2 (32-bit Oracle libraries required. Typically included in 64-bit client installer.)</li> </ul>
Linux	<ul style="list-style-type: none"> <li>Red Hat Enterprise Server 6 (64-bit)<sup>1)</sup></li> <li>SUSE Enterprise Linux 10 SP2 (64-bit)</li> <li>SUSE Enterprise Linux 11 (64-bit)</li> </ul>	<ul style="list-style-type: none"> <li>Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx</li> </ul>	<ul style="list-style-type: none"> <li>Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (32-bit Oracle libraries required. Typically included in 64-bit client installer.)</li> </ul>
Solaris	<ul style="list-style-type: none"> <li>Solaris 10 (64-bit SPARC)<sup>2)</sup></li> </ul>	<ul style="list-style-type: none"> <li>Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx</li> </ul>	<ul style="list-style-type: none"> <li>Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (32-bit Oracle libraries required. Typically included in 64-bit client installer.)</li> </ul>
AIX	<ul style="list-style-type: none"> <li>AIX 6.1<sup>3)</sup></li> <li>AIX 7.1<sup>4)</sup></li> </ul>	<ul style="list-style-type: none"> <li>Tomcat 6.0 (OEM provided)/JDK 1.6.0_xx</li> </ul>	<ul style="list-style-type: none"> <li>Oracle 11g R2/Oracle Net Client 11g R2 (11.2), Oracle JDBC 11g R2 (32-bit Oracle libraries required. Typically included in 64-bit client installer.)</li> </ul>

<sup>1)</sup>Minimum patch requirements for RHEL 6: compat-libstdc++-33-3.2.3-69.el6.i686 (compatibility standard C++ library from GCC 3.3.4); glibc-2.12-1 (RedHat advisory RHBA-2007:0619-3); libXext.i386; libncurses.so.5

<sup>2)</sup>Minimum patch requirements for Solaris 10: SUNWgzip; SUNWzlib; SUNWscpu; SUNWbash; SUNWbcp, SUNWxcu4 XCU4 Utilities; SUNWxwfont; SUNWxwpl; SUNWlibC; SUNWeu8os - American English/UTF-8 L10N For OS Environment User Files; SUNWeuluf - UTF-8 L10N For Language Environment User Files; SUNWuiu8 - Iconv modules for UTF-8 Locale; SUNWulcf - UTF-8 Locale Environment Common Files; SUNWmfrun; SUNWxwice.

<sup>3)</sup>Minimum patch requirements for AIX 6.1: Technology Level 2 SP1; IBM C++ Runtime Environment Components for AIX => xlc.aix61.rte:10.1.0.0.

<sup>4)</sup>Minimum patch requirements for AIX 7.1: Technology Level 7.1.0.0 / 7100-00-00-0000; IBM C++ Runtime Environment Components for AIX => xlc.aix61.rte:11.1.0.1.

# Appendix B: Accessibility Features

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This section contains the following topics:

[Product Enhancements](#) (see page 35)

[Set Up Accessibility for a User](#) (see page 38)

[Keyboard Shortcuts](#) (see page 38)

## Product Enhancements

CA Technologies is committed to ensuring all customers can successfully use its products and supporting documentation to accomplish business tasks. Enable the accessibility mode to optimize contrast in the user interface and assist a screen reader for those users who need assistance.

CA Clarity PPM accessibility features are best when used with the Mozilla Firefox 13 browser and the Job Access With Speech (JAWS) screen reader.

CA Clarity PPM inherits accessibility enhancements from Windows-based and Macintosh-based environments in the following areas:

- Display
- Sound
- Keyboard
- Mouse

**Note:** The information in the following topics 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. Oracle 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 enabled or disabled.

### **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 pressed.

### **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

## Set Up Accessibility for a User

Use these steps to set up accessibility for a user.

**Follow these steps:**

1. Open Administration, and from Organization and Access, click Resources.
2. Click the name of the resource.

The properties page appears.

3. Select the appropriate Accessibility check boxes:

**Screen Reader Optimized UI**

Determines whether the user interface is optimized so that a screen reader can better recognize the features. Select this check box for any visually impaired user who is using a screen reader.

**Default:** Cleared

**High Contrast Color Mode**

Determines whether a specific UI theme to assist color-deficient users is used. If selected, the user sees the High Contrast UI theme.

**Default:** Cleared

4. Save your changes.
5. (Optional) If you selected the Screen Reader Optimized UI, verify that the screen reader software is running on the user's computer.
6. If the user is logged in to CA Clarity PPM, instruct the user to log out and log back in.

## Keyboard Shortcuts

### Keyboard Shortcuts for Basic Features

The following table shows the keyboard shortcuts for basic features available on all CA Clarity PPM pages.

Feature	Key Combination
Home Menu	Ctrl+Alt+h
Administration Menu	Ctrl+Alt+a
Favorites Menu	Ctrl+Alt+f

Feature	Key Combination
Back	Ctrl+Alt+b or Alt+Left Arrow
Home Page	Ctrl+Alt+Home
Refresh	Ctrl+Alt+F5
Search	Ctrl+Alt+s
History	Ctrl+Alt+v
Help	F1

## Keyboard Shortcuts for CA Clarity PPM Actions

The following table shows keyboard shortcuts for actions on CA Clarity PPM pages.

Action	Key Combination	Alternate Accessibility Key Combination
Activate a field editor (for example, a date picker)	Enter	Alt+Enter
Close a popup	Esc	Shift+Esc
Open a tab menu	Enter	Alt+Enter
Move left, right, up, or down in a menu	Left Arrow Right Arrow Up Arrow Down Arrow	Alt+Up Arrow Alt+Down Arrow Alt+Up Arrow Alt+Down Arrow
Select a highlighted menu item	Enter	Alt+Enter
Open a link in a list page	Ctrl+Enter	
Select or clear a check box <b>Note:</b> Focus must be on the checkbox.	Space Bar	
Expand a hierarchical list <b>Note:</b> Focus must be on the + in the hierarchical list.	Space Bar	

## Keyboard Shortcuts for Lists

The following table shows the keyboard shortcuts for lists.

Action	Mode	Keyboard Combination
Switch between edit and display mode in a list	Display, Edit	Enter
Move from cell to cell through a list (grid)	Display	Left Arrow Right Arrow Up Arrow Down Arrow
Move to different areas within a list: portlet icons, column headers, body of list, buttons	Display	Tab (Forward) Shift+Tab (Back)
Switch to display mode	Edit	Esc or Enter
Move left or right within a cell	Edit	Left Arrow Right Arrow
Move from editable cell to editable cell	Edit	Tab (Forward) Shift+Tab (Back)
Open a drop-down list or a date selector	Edit	Enter
Move through selection items in a drop-down	Edit	Up Arrow Down Arrow
Select a highlighted value in a drop-down or a date selector	Edit	Enter
Highlight a date in a date selector	Edit	Down Arrow
Add a new line in a long text area	Edit	Ctrl+Enter



# Appendix C: Third-Party Acknowledgements

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The license information for third-party utilities and software that CA Clarity PPM uses is available in the \Bookshelf Files\TPSA folder of the CA Technologies Bookshelf.

You can open the license information on the CA Technologies Bookshelf. Click the View TXT link next to Third-Party Acknowledgments.